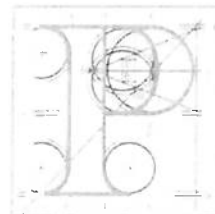


Our Case Number: ABP-321776-25

Your Reference: Health Service Executive - Merlin Park



An
Bord
Pleanála

MKO
Planning & Environmental Consultants
Tuam Road
Galway
Co. Galway
H91 VW84

Date: 22 April 2025

Re: BusConnects Galway: Dublin Road Development
R338 Dublin Road, Galway City.

Dear Sir / Madam,

An Bord Pleanála has received your recent submission in relation to the above-mentioned proposed road development and will take it into consideration in its determination of the matter.

Please be advised that those listed on the Compulsory Purchase Order schedule associated with this application are not required to pay the €50 fee associated with this case. As you are listed on the schedule, a refund of €50 will be issued to the debit/credit card used to make payment for this submission.

Please note that the proposed road development shall not be carried out unless the Board has approved it or approved it with modifications.

The Board has also received an application for confirmation of a compulsory purchase order which relates to this proposed road development. The Board has absolute discretion to hold an oral hearing in respect of any application before it, in accordance with section 218 of the Planning and Development Act 2000, as amended. Accordingly, the Board will inform you in due course on this matter. The Board shall also make a decision on both applications at the same time.

If you have any queries in relation to this matter please contact the undersigned officer of the Board at laps@pleanala.ie

Please quote the above-mentioned An Bord Pleanála reference number in any correspondence or telephone contact with the Board.

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Yours faithfully,



Lauren Griffin
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HA02A

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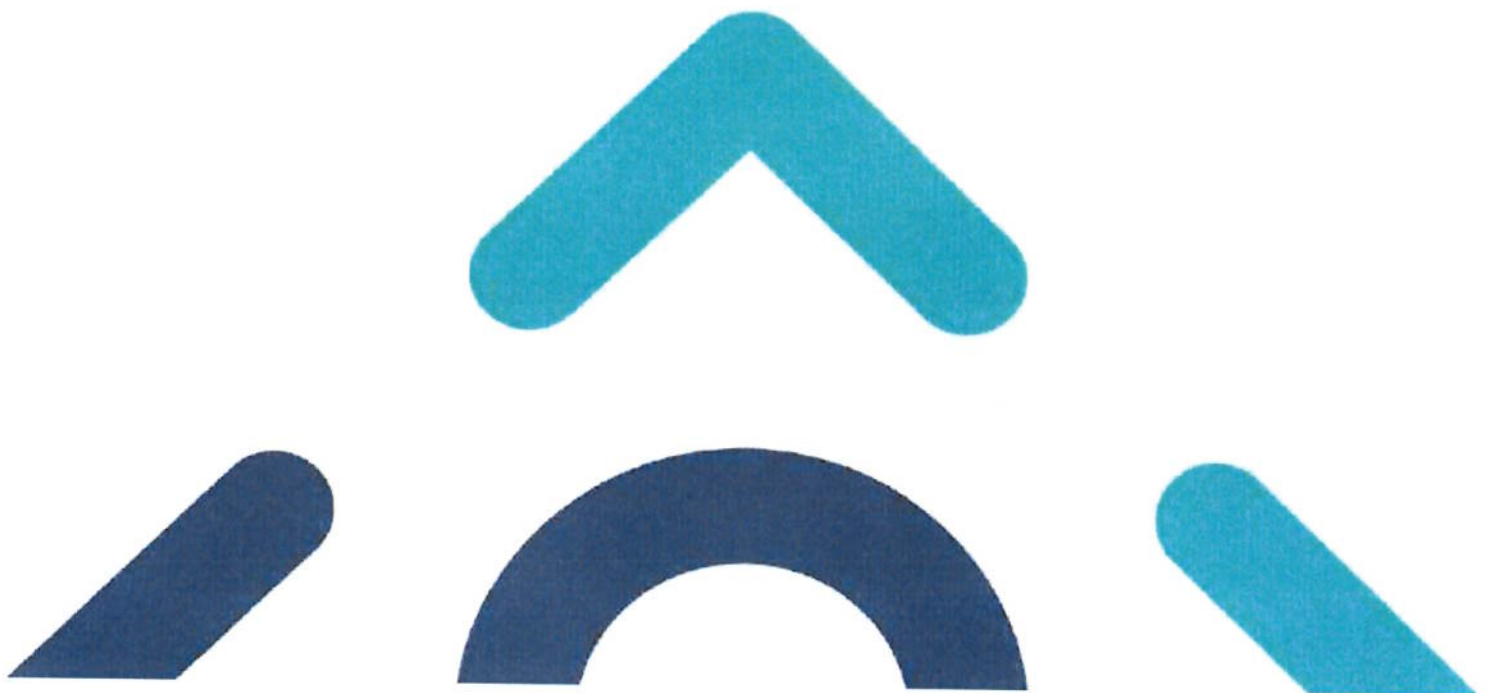
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**Bus Connects Dublin Road
Galway Planning
Application & CPO
Submission on behalf of
HSE – Merlin Park
University Hospital
Campus**

ABP Pl. Ref: 321776
CPO Case Ref: 321882





DOCUMENT DETAILS

Client: **Health Service Executive**

Project Title: **ABP Pl. Ref: 321776 CPO Case Ref: 321882**

Project Number: **250369**

Document Title: **Bus Connects Dublin Road Galway Planning Application & CPO Submission on behalf of HSE – Merlin Park University Hospital Campus**

Document File Name: **250369 – Busconnects Submission – F 16.04.2025**

Prepared By: **MKO
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Planning and
Environmental
Consultants

Rev	Status	Date	Author(s)	Approved By
01	Final	16/04/2025	KF/ES	SMC

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1.

EXECUTIVE SUMMARY

On behalf of our client, Health Service Executive (HSE), MKO have been instructed to make the following submission to the BusConnects Dublin Road Galway Planning Application (ABP Ref: 321776) and Compulsory Purchase Order (Case Ref: 321882). These applications were submitted to ABP on 14th February 2025 and are open to public submission until 16th April 2025.

The HSE is fully supportive of the BusConnects Dublin Road Galway project as a key infrastructure upgrade which will benefit this part of the City and enhance and facilitate more sustainable transport opportunities for those who live and work in Galway but also in the immediate vicinity of the proposed Dublin Road project. The BusConnects scheme on completion shall be of significant benefit in supporting further implementation of mobility planning at Merlin Park University Hospital (MPUH) campus.

The documentation contained within the planning application illustrates the extent of works proposed in the vicinity of the existing MPUH access/egress point from the Dublin Road and as far east as the Dublin Road/Gleann na Ri Junction. The proposed development comprises the provision of a widened Dublin Road corridor in order to facilitate new footpaths, cycle lanes, bus lanes in both directions as well as the provision of associated landscaping. Section 6.4.3.4 of the EIAR describes the detail in regard to the existing MPUH entrance and how it will be upgraded to a signalised junction. MKO would contend therefore, that the proposed BusConnects Dublin Road project is inconsistent with the GTS and the GCDP (Objective 4.8) as it fails to make even a cursory provision for the requisite pedestrian, cycle and public transport infrastructure at the Dublin Road/Galway Crystal junction, the requirement for which is clearly stated in the GTS and GCDP. The design of the Dublin Road/Galway Crystal junction should provide a fourth arm (to serve MPUH), and the overarching junction design in respect of signals, crossings, bus and cycle lane provision, should reflect this.

Furthermore, the Traffic & Transport Strategy included in Chapter 6 of the Dublin Road BusConnects EIAR concludes that even with the proposed development in situ, the Dublin Road/MPUH junction will operate over 100% capacity. It is therefore unclear, as to why the proposed Dublin Road Bus Connects project would omit infrastructure upgrades, identified in the GTS as far back as 2016, and explicitly provided for in the GCDP, particularly where these upgrades could assist with resolving the existing junction capacity issue identified and that are an integral part of long established plans to facilitate improved accessibility to MPUH.

In regard to the CPO Submission, the land take at the interface between MPUH and the Dublin Road/Galway Crystal junction is considered to be insufficient to accommodate the extent of the works required for completion of the scheme, including the link into MPUH. On this basis, the HSE wish to seek assurance that the project which is intended progress, shall include the entire land requirements at this stage, to complete the scheme at the junction, queuing lanes on the Dublin road and routes into MPUH as necessary. This is in the interest of delivering the complete BusConnects scheme to serve MPUH rather than the minimum, possibly staged approach that is currently included in the ABP submissions. The HSE is also concerned that, during the delivery phase, additional land may be required to provide for the full extent of upgrade works that are required, potentially triggering a new CPO process. To avoid delays and complications later in the process, the HSE requests that the BusConnects Project thoroughly assess and make provision for the acquisition of the requisite lands as part of this current process.

In regard to boundary treatments, the HSE wish to ensure that the BusConnects Dublin Road Galway project confirms that that boundary treatment of replacing the existing wall as indicated is the solution that secure temporary fencing is provided during construction in the interests of safety and security for operational activity at MPUH. HSE wishes to request consultation with the HSE relating to the boundary treatment Method Statements to be provided for comment and review by the HSE, prior to commencement of works. It is appreciated that the rebuilding of the existing wall on a like-for-like basis will necessitate careful consideration in terms of dismantling and storage of the existing stone.

Whilst the HSE welcomes the project, it wishes to highlight a number of important concerns raised in this submission. Accordingly, a summary of each of the points are as follows:

- MPUH is a strategic healthcare campus in the west of Ireland experiencing significant growth in recent years. It is imperative for the future overall development in MPUH that provisions for the future fourth arm and junction upgrade should be considered and acknowledged by the BusConnects application.
- BusConnects Dublin Road Galway scheme is inconsistent with the policies and objectives in the Galway City Development Plan, by not acknowledging the planned future access to the MPUH campus. We respectfully request that the scheme is redesigned in accordance with the Galway City Development Plan and Galway Transport Strategy.
- HSE acknowledges the boundary treatment proposals, but requests reassurance that consultation efforts will be made with the HSE, and that Method Statements are reviewed and approved prior to commencement of development.
- It is important to reassess the land take for the CPO, in line with the points raised in this Submission, particularly in relation to the additional lands which may be required for the provision of the new entrance to MPUH.

INTRODUCTION

On behalf of our client, Health Service Executive (HSE), C/O Gate Lodge, Merlin Park University Hospital Galway, MKO have been instructed to make the following submission to the BusConnects Dublin Road Galway Planning Application (ABP Ref: 321776) and Compulsory Purchase Order (Case Ref: 321882). These applications were submitted to ABP on 14th February 2025 and are open to public submission until 16th April 2025.

The BusConnects project is intended to provide pedestrian, cycle and public transport infrastructure along a 3.8 km corridor on the R338 Dublin Road from the Moneenageisha Junction to the Doughiska Junction. MKO are making a submission on behalf of the HSE, who own and operate the Merlin Park Hospital Campus, situated along the R338 and adjacent to where pedestrian, cycle and public transport corridor infrastructure is proposed.

The HSE is fully supportive of the BusConnects Dublin Road Galway project as a key infrastructure upgrade which will benefit this part of the City and enhance and facilitate more sustainable transport opportunities for those who live and work in Galway but also in the immediate vicinity of the proposed Dublin Road project. Improved public transport links will facilitate better access to healthcare services for patients and visitors at Merlin Park University Hospital (MPUH) as well as providing enhanced accessibility for staff, while also contributing to reduced traffic congestion on the Dublin Road.

While the HSE is fully supportive of the project in principle, the purpose of this submission is to set out a number of matters in respect of the proposed design of the project and particularly its interface with MPUH. It is of critical importance that the Bus Connects project does not negatively impact on the ongoing or future operations of the MPUH and its central role in the provision of healthcare services for Galway and for the wider region which it serves.

3. SITE LOCATION & PROPOSED DEVELOPMENT

3.1 Site Location

Merlin Park University Hospital (MPUH) is situated along the R338 between the Skerritt roundabout and Doughiska Junction. Originally opened as a newly built sanatorium for the treatment of tuberculosis patients in 1953, today, MPUH is an acute Model 2 hospital offering a comprehensive range of services for elective and scheduled care on an In-patient, Outpatient and Day Care basis for both Acute and Non-Acute patient care. It also provides corporate and administrative support for both acute and non-acute Services, in addition, to regional and corporate functions.

MPUH forms part of Galway University Hospital (GUH) alongside its sister campus UHG, in Galway City Centre. The total HSE staff number on the MPUH Campus is currently circa. 1,500.

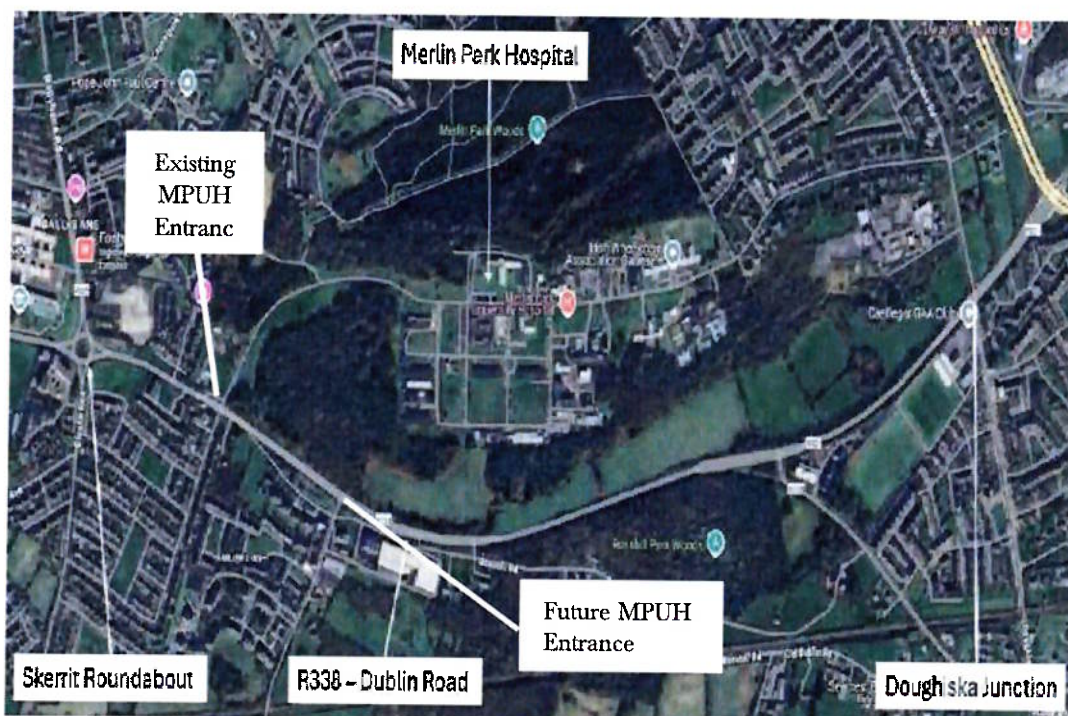


Figure 1- Merlin Park Hospital Site Location Context (Google Maps)

3.2 Bus Connects Dublin Road & MPUH – Proposed Development

The extent and associated detail of the Bus Connects Dublin Road Project is illustrated in General Arrangement Drawings 06-11 as prepared by Barry Transportation & Egis and as enclosed with the planning application to An Bord Pleanála (ABP) Figure 1. General Arrangement Drawing 06 illustrates the extent of works proposed in the vicinity of the existing MPUH access/egress point from the Dublin Road and as far east as the Dublin Road/Gleann na Ri Junction as illustrated in Figure 2 below. This Section of the submission will illustrate and describe the extent of the works proposed in the vicinity of MPUH.

The proposed development comprises the provision of a widened Dublin Road corridor in order to facilitate new footpaths, cycle lanes, bus lanes in both directions as well as the provision of associated

landscaping. Section 6.4.3.4 of the EIAR which accompanies the Bus Connects Dublin Road Project planning application describes the existing access arrangement to MPUH (Merlin Meadows) as follows:

'Dublin Road/Merlin Meadows is a three-arm priority junction. Merlin Meadows has two entry lanes, and one exit lane. Dublin Road has one entry lane for eastbound traffic, and two entry lanes for westbound traffic, including one short lane for right-turning traffic into Merlin Meadows. A bus lane is also present for westbound traffic.'

The reference to Merlin Meadows should be read as the Merlin Park University Hospital and the junction being referred to is the existing entrance to MPUH. Merlin Meadows is the existing amenity zoned grasslands in close proximity to Merlin Park University Hospital.

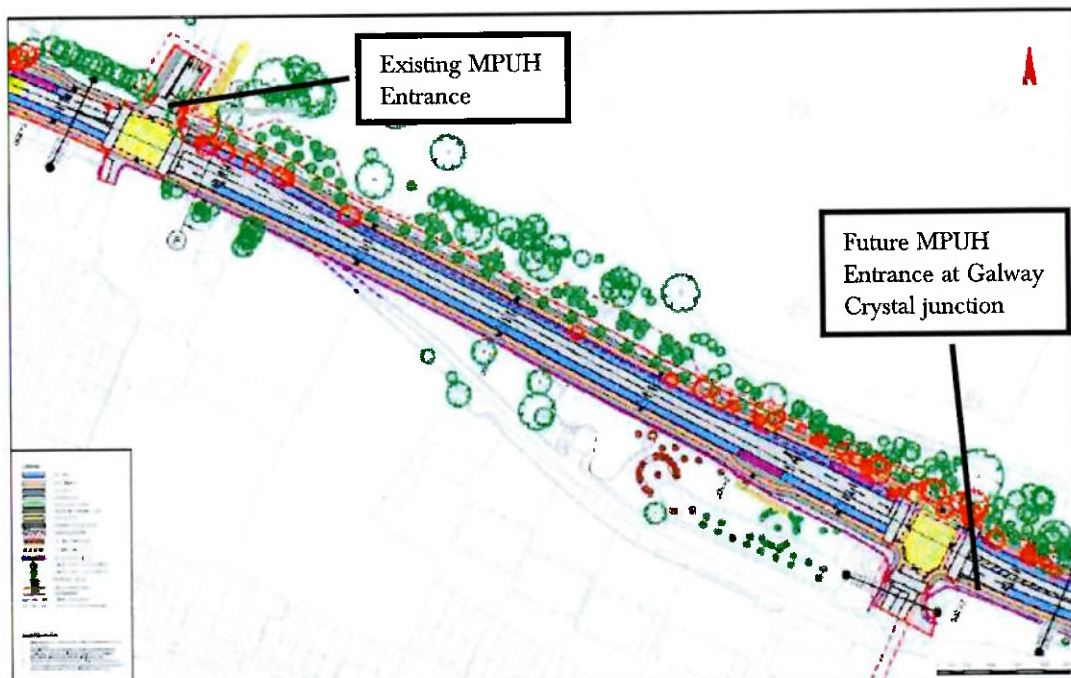


Figure 2 - Bus Connects at MPUH Entrance

Section 6.5.7.5.1 of the EIAR describes the Pedestrian Infrastructure Changes proposed and describes works at existing access/egress to MPUH as follows:

'Upgrade of the Dublin Road/Merlin Meadows junction to a four-arm signalised junction, with signals on three arms.'

'Upgrade of signalised crossings on all arms of the Dublin Road/Merlin Park Lane junction to toucan crossings.'

Section 6.5.7.5.2 of the EIAR describes the cycling infrastructure upgrades in the vicinity of MPUH as follows:

'2m two-way segregated cycle tracks on each side of the road between Skerritt Roundabout and the R336 Dublin Road/Coast Road junction.'

From the above, it is understood that the Bus Connects scheme proposes to upgrade the existing entrance to MPUH to a signalised junction to incorporate it into the proposed Bus Connects. While the HSE welcomes the project, it wishes to highlight a number of significant concerns raised in this submission. Accordingly, a summary of each of the concerns are provided below and expanded upon in greater detail in the following sections of this document.

- BusConnects Dublin Road Galway scheme is inconsistent with the policies and objectives in the Galway City Development Plan, by not acknowledging the planned future public transport access route to the MPUH campus at the Galway Crystal junction.
- HSE acknowledges the boundary treatment proposals, but reassurance that secure boundary treatment will be provided at all stages and that consultation efforts will be made with the HSE, to review and comment on Method Statements prior to commencement of development.

4.

ROLE OF MPUH

4.1

Context

Merlin Park University Hospital (MPUH) Campus comprises of an area of 57.74 Hectares. The current land use zoning in the Galway City Development Plan is a mix of institutional and amenity. There are 26.12 Hectares zoned for Community/ Instructional and 31.62 Hectares zoned for recreational/ Amenity use.

The MPUH campus activity/ uses currently be categories broadly in to the following,

- Acute Services
- Non-Acute Services
- Regional/ Corporate support and administration

Acute Services

Galway University Hospitals (GUH) is comprised of both University Hospital Galway (UHG) and Merlin Park University Hospital Galway (MPUH) and is part of the HSE West North West region in the HSE. While UHG and MPUH operate on separate sites, together they form the overarching Galway University Hospitals. They operate in a coherent and integrated manner, UHG site focusing on acute and specialist services where as high volume low complexity elective and ambulatory services are provided at MPUH.

UHG is a Model 4 hospital delivering Emergency / Theatre Services, Critical Care, Cancer and a wide range of Tertiary Referral Services. The hospital is a designated supra regional Centre for Cancer and Cardiac Services. It provides secondary, regional and supra-regional services for the Health Services Executive West and is one of the major academic teaching hospitals in Ireland and is attached to the University of Galway (NUIG) with strong research, education and service delivery links with the university.

MPUH is a Model 2 Hospital delivering non-complex elective Medical, Surgical and OPD Services including Rehabilitation, Renal Dialysis, Orthopaedics, Respiratory, Rheumatology and Interventional Radiology. Recent developments on the Merlin Park site include Phase 1 OPD Building and Adult Cystic Fibrosis which opened in 2025.

In 2019 and update 2022, the Options Appraisal Report developed an overall plan of the high-level infrastructure requirements for a new West & North West hospitals in Galway. The current plan and overall strategy is to develop all acute complex and cancer care on the UHG site and the high volume / lower complexity care and ambulatory low complex care on the Merlin Park Campus and to make optimum use of both hospital sites.

Non-Acute Services

- Community Nursing Unit - Short & long stay accommodation
- Mental Health Service for Children & Adolescents - In-patient and Out-patient clinics
- Mental health residence
- Dental
- Podiatry
- Various support service and administration

Regional/ Corporate support and administration:

- MPUH also provides administrative support functions for both acute and non-acute services.
- Regional Health Office
- Regional/ local Human Resources
- Regional/ local Finance

- Regional/local Capital & Estates
- Public Health
- Tusla
- National Ambulance Service Regional & NAS base for Galway & the Environs

The total HSE staff number on the MPUH campus is circa. 1,500.

As the delivery of healthcare services is intended to be largely split with acute in UHG and elective MPUH, the approach of taking elective care out of the congested city centre makes elective care more accessible to the wider community. Hence, in order to cater for the increase in staff and patient visitors to MPUH, there will be a need to improve access, developed mobility planning and a proposed new entrance will be required in time to support increases these objectives. This initial version of the Feasibility Study and enclosed documents, outline information related to a proposed new entrance to MPUH at the Dublin Road/Galway Crystal junction.

4.2

Ongoing & Future Projects

There are a number of significant projects being planned along with ongoing use and renovation of the existing building stock on the campus as listed in Table 1 below.

Table 1 Significant Projects both ongoing and planned

Development	Use	Size (sqm)	Status	Proposed Opening Date
Surgical Hub	The Surgical Hub is intended as a Regional Hub, serving the wider catchment of Galway City, Ireland's fourth largest urban centre by population and the wider West Region particularly, encompassing Galway, Roscommon and Mayo and potentially the North West of the area. The facility will support decongestion on the UHG site.	4,330 sqm	Construction ongoing	2026
60 Bed CNU	A two storey, part single storey Community Nursing Unit (CNU) with 60 en-suite bedrooms, including a 10-bed dementia unit in the single storey block. There are plans to further extend this with a Phase 2 development, adding another 50 / 60 beds.	5,165 sqm	Construction ongoing	2026
Phase 1& 2 – Outpatients Department	Phase 01 and the proposed Phase 02 OPD buildings in MPUH will to help decongest the UHG site, particularly in and around the existing Emergency Department (ED) location. This will allow OPD patients to receive the necessary care away from the Acute Hospital environment at UHG.	Phase 1: 2,325 sqm Phase 2: 3,400 sqm	Phase 1: Complete Phase 2: Stage 1 Design Development	Phase 1: Q1 2025 Phase 2: 2029
Elective Hospital	The Elective Hospital will support the separation of scheduled and unscheduled care, reduce cancellations and address lengthy waiting lists for elective procedures. Separating acute and non-acute services through this purpose built elective facility will also greatly improve efficiency. Procedures in the new elective hospital will be high volume, low-to-medium complexity surgeries which can be efficiently planned with dedicated theatres provided.	22,000 sqm	Stage 1 Preliminary Design / Masterplan	2030
Electrical Infrastructure Upgrade	The HSE/MPUH have carried out a review of their electrical infrastructure, at Merlin Park University Hospital Campus, in advance of proposed future developments of the healthcare facilities on the campus. This review identified that the existing Transformer and Ring Main Unit (RMU) arrangements needed urgent upgrading, and that this upgrade should not await future projects are complete.	Transformer Room: 60.82 sqm RMU Room: 27.32 sqm	Complete	Open 2024/ 2025
District Heating Upgrade	The Merlin Park University Hospital (MPUH) campus comprises of currently 37 No. existing buildings and currently two buildings in construction and two further buildings in the development stage. HSE are proposing to upgrade and future proof the existing Campus	n/a	Design Build Design Development	(TBC)

4.3

New Access – Detailed Feasibility

Based on the recognised need for a new access to MPUH both in the context of the HSE's requirements and as identified in the Galway Transport Strategy and the Galway City Development Plan (discussed in proceeding sections), the HSE have commenced detailed feasibility analysis of the new access with a view to preparing detailed design and subsequently, preparing and submitting a planning application to Galway City Council.

A Design Team was commissioned to deliver a Feasibility Study for a new access road to the hospital campus from the Galway Crystal junction on the Dublin Road to be provided alongside / in conjunction/ coordinated with the BusConnects – Public Transport Route to service MPUH. The new access road would include the integration with the existing road infrastructure in Merlin Park. The Feasibility Study will include, but is not limited to, the following:

- Traffic impact considerations for the Dublin Road.
- Geometric junction design consideration on the Dublin Road.
- Storm water drainage and the associated infrastructure requirements.
- Pedestrian permeability and active travel considerations.
- Mechanical and electrical opportunities in regard to new routes for electrical, gas, water and telecom supplies to service existing and future campus developments.
- Environmental and ecological implications.
- Impact on proposed infrastructure projects such as Bus Connects and opportunities to enhance integration of both projects.
- Arboriculture considerations as the proposed route is through part of The Meadows woodland.
- Order of Magnitude Costs to encapsulate the design, statutory approvals and construction including the requirements required to address environmental aspects highlighted through LA and third party liaison.

The above will be presented within the final version of Feasibility Study led by the Design Team architect, with input from the civil & structural engineer, mechanical & electrical engineer, ecologist, arboriculturist, archaeologist and quantity surveyor.

The study commenced in Q3 2024 with the procurement of field surveys. An initial Draft copy of the current status of the report is included in Appendix A of this document. It is envisaged that the Feasibility Study will be complete in June/July 2025. Further local traffic counts are due to be completed by HSE to complete the survey requirements.

5.

BUS CONNECTS DUBLIN ROAD PLANNING DOCUMENTATION

The planning application for Bus Connects Dublin Road includes an Environmental Impact Assessment Report (EIAR) and Chapter 6 of the EIAR comprises the Traffic and Transport Assessment (TTA) for the project. The TTA includes for detailed analysis of the study area for the Bus Connects Dublin Road project and models various scenarios for the purpose of assessment. Section 6.5.3 of the TTA describes the core scenarios that are assessed namely ‘Do Nothing’, ‘Do Minimum’ and ‘Do Something’. These scenarios are linked to the predicted opening year of the proposed development in 2028 and a subsequent design assessment year of 2043 (opening year + 15 years).

Section 6.5.2 of the TTA describes ‘Do Nothing’ Scenario as one in which there would be no changes to existing traffic infrastructure. The TTA goes on to state that high levels of traffic are associated with discouraging pedestrian and cyclist activity and that the baseline situation for of congestion and journey time reliability issues for buses would also continue and potentially be exacerbated over time as traffic congestion increase in line with travel demand growth.

Section 6.5.3 of the TTA describes the ‘Do Minimum’ Scenario as one which represents the likely traffic and transport conditions of the direct and indirect study areas without the proposed development (i.e. Dublin Road Bus Connects). Section 6.5.4 of the TTA describes the ‘Do Something’ Scenario as the likely conditions of the direct and indirect study area with the proposed development in place.

Sections 6.5.8.4.8 & 6.5.8.4.10 discusses predicted traffic capacity issues on the Dublin Road in various scenarios (Do Minimum & Do Something) for future years (2028 & 2043) and states the following for 2028:

‘Dublin Road/Merlin Park – operates above 100% during both the Do Minimum and Do Something scenarios;’

The TTA states the following in respect of 2043:

‘Dublin Road/Merlin Park – operates above 100% during both the Do Minimum and Do Something scenarios;’

MKO’s interpretation of the information set out above is that, in a scenario where the proposed development (Bus Connects Dublin Road) has been completed, the existing Dublin Road/Merlin Park junction will operate above capacity. This capacity issue is predicted in the TTA to remain in the design assessment year of 2043. Therefore, as MKO understands, the proposed development will not alleviate existing traffic congestion/junction capacity issues that affect MPUH and particularly the MPUH/Dublin Road junction.

6.1 Galway City Development Plan 2023-2029

The GCDP 2023-2029 also sets out policies and objectives which highlight the support for future expansion of MPUH, and the enhancement of public infrastructure to facilitate this expansion. The



Specific Objective 4.8

‘Facilitate a new access to Merlin Park Hospital from the Dublin Road’

Policy 7.8 Healthcare

4. Support the delivery of an enhanced regional healthcare service, including for a new Emergency Department at University Hospital Galway (UHG) and expanded hospital services at Merlin Park University Hospital (MPUH) that will serve the Metropolitan Area and the wider regional catchment

5. Support the delivery of key strategic healthcare infrastructure, including a new Elective Hospital, within the city with the preferred location at Merlin Park Hospital campus'

Galway Transport Strategy (2016)

The Galway Transport Strategy (GTS) was published in 2016 and is a document that was prepared by Galway City Council & Galway County Council in conjunction with the National Transport Authority and comprises an integrated transport strategy for Galway and its environs. The GTS sets out a series of proposed actions and measures for implementation covering infrastructural, operational and transport policy requirements. Section 2.4.3 of the GTS identifies ‘*Major Trip Origins and Destinations*’ and identifies ‘Merlin Park Hospital’ (Table 2.1) as a major trip generator. The GTS identifies general infrastructure upgrades (Table 4.3) and Bus Priority Measures (Table 5.4) to effectively assist in reducing traffic congestion and junction capacity issues as well as making provision for more sustainable modes of transport. In respect of general infrastructure upgrades (Table 4.3) the GTS identifies the requirement for:

‘New Entrance to hospital from the Old Dublin Road at the Galway Crystal junction, forming a signalised crossroads junction’.

In respect of Bus Priority Measures (Table 5.4), the GTS identifies the requirement for:

‘Bus priority at new entrance to hospital from the Old Dublin Road’.

The provisions of the GTS, how they are captured in the Galway City Development Plan 2023-2029 and the consistency of the proposed Bus Connects Dublin Road project with them are discussed in the proceeding sections.

The (GTS) highlights the design interventions, which ensure that the core bus network identified in the GTS can be delivered in practice and meets the level of service objectives identified in the strategy. The GTS makes multiple reference to MPUH, as per Figures 4 and 5 below –

Merlin Park Hospital	Bus priority at new entrance to hospital from the Old Dublin Road.
Merlin Park Hospital	Access to Doughiska Road to be provided for bus and ambulance use only.

Figure 4 Bus Priority Infrastructure Measures Source: GTS 2016

Merlin Park Hospital / Galway Crystal Junction	New entrance to hospital from the Old Dublin Road at the Galway Crystal junction, forming a signalised crossroads junction.
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Figure 5 Bus Priority Infrastructure Measures Source: GTS 2016

7.

HSE SUBMISSION TO PLANNING APPLICATION (ABP REF: 321776)

7.1

New Entrance to Merlin Park University Hospital

The strategic importance of MPUH and its role in delivering healthcare infrastructure and services for Galway City and the region are discussed in Section 3 above and the enclosed Feasibility Report, prepared by Rhatigan Architects. There are currently a number of projects nearing completion on the Campus and/or projects that are in the construction phase. In addition, MPUH is the preferred location for the new Elective Hospital and various other infrastructure and service upgrades and enhancements. The importance of MPUH's role and Galway City Council's aspiration to support the ongoing development and enhancement of services on the Campus is enshrined in *Policy 7.8 Healthcare* of the GCDP 2023-2029. For the avoidance of doubt, it should be noted by the Board that this policy is explicit in stating that it is an objective of GCC to facilitate the delivery of an enhanced regional healthcare service and expanded hospital services at Merlin Park University Hospital as well as the delivery of key strategic healthcare infrastructure at MPUH.

The development potential of the MPUH Campus is likely to be constrained by traffic congestion and junction capacity issues at the main entrance/egress between the Campus and the Dublin Road into the future. These issues were identified as far back as 2016 in the preparation of the GTS and the associated identification of specific infrastructure upgrade measures to address congestion and road/junction capacity issues, specifically by the creation of a new access to MPUH which would include bus priority. It should be noted that the National Transport Authority (NTA) were a key stakeholder in the preparation of the GTS. These proposals have informed the current Galway City Development Plan (GCDP) and specifically Objective 4.8 which makes explicit provision for the creation of this new access. This is also a mapped objective in the GCDP Zoning Map providing for this new access. There is also a mapped objective in the GCDP Zoning Map for the provision of a bus route into and through the MPUH Campus via the new access (as per Figure 3 above).

The Traffic & Transport Strategy included in Chapter 6 of the Dublin Road Bus Connects EIAR concludes that even with the proposed development in situ, the Dublin Road/MPUH junction will operate over 100% capacity. It is therefore unclear, as to why the proposed Dublin Road Bus Connects project would omit infrastructure upgrades, identified in the GTS as far back as 2016, and explicitly provided for in the GCDP, particularly where these upgrades would resolve the junction capacity issue identified in the Bus Connects EIAR and that are an integral part of long established plans to facilitate improved accessibility to MPUH.

While it is not being suggested that Bus Connects Dublin Road should deliver all objectives of the GCDP, it is absolutely reasonable to conclude that it should provide for identified and required access and public transport infrastructure that is directly associated with the overarching goal of the Bus Connects project i.e. to provide pedestrian, cycle and public transport infrastructure along a 3.8 km corridor on the R338 Dublin Road from the Moneenageisha Junction to the Doughiska Junction and particularly where those infrastructure upgrades are located effectively within the red line boundary of the project and/or immediately adjacent. For example, the Bus Connects infrastructure, as MKO understands, is being delivered as per the mapped objective in the GCDP for 'bus routes' as indicated by the cyan dashed line in Figure 3 above. The cyan dashed line is located on the Dublin Road but also branches into MPUH i.e. the extent of the required 'bus routes' identified on the Dublin Road and into MPUH share the same mapped objective in the GCDP, yet the Bus Connects Dublin Road project omits any provision or accommodation for same within MPUH.

RPS have been commissioned to prepare a draft Feasibility Assessment (Appendix 1 of this submission). The draft design includes for a fourth arm to the junction, to provide associated signals, crossings, bus

and cycle lane provision. Should the BusConnects proposals proceed as designed, the technical feasibility of constructing the new access road to the MPUH is considered to have a significant impact on the currently proposed BusConnects scheme. The concurrent coordination of both schemes at detailed design and delivery stages is therefore considered essential to maximise operational efficiency, minimise abortive works, and ensure long-term integration within the wider strategic transport network.

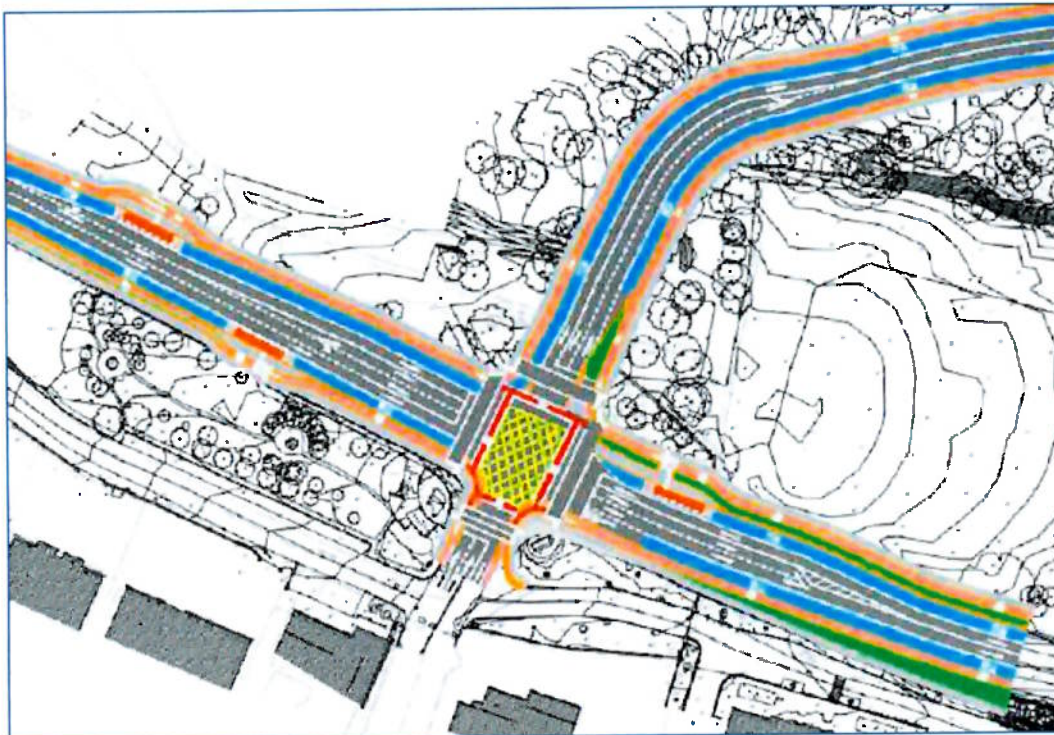


Figure 6 Preliminary Option for development of MPUH Entrance

MKO would contend therefore, that the proposed Bus Connects Dublin Road project is inconsistent with the GTS and the GCDP (Objective 4.8) as it fails to make even a cursory provision for the requisite pedestrian, cycle and public transport infrastructure at the Dublin Road/Galway Crystal junction, the requirement for which is clearly stated in the GTS and GCDP. Again, it is not suggested that the Bus Connects Dublin Road should provide the full extent of the infrastructure upgrade required i.e. linking the Dublin Road to the existing internal MPUH road network, but the design of the Dublin Road/Galway Crystal junction should provide a fourth arm (to serve MPUH), and the overarching junction design in respect of signals, crossings, bus and cycle lane provision, should reflect this.

Furthermore, the failure to provide a section off the junction for the fourth arm or to provide associated signals, crossings, bus and cycle lane provision has the potential to make a future development proposal on the part of the HSE for this infrastructure, a very challenging endeavour. In the event that the Bus Connects Dublin Project receives planning permission and/or is constructed prior to any future 'fourth arm' proposal, the HSE will, in MKO's view, likely face opposition from the National Transport Authority and/or GCC in the context of a planning application, where the HSE will require at the very least to redesign a permitted junction (in the event Dublin Road Bus Connects is not completed before HSE receive planning permission) or to undertake significant physical alterations to a recently constructed NTA project (in the event Dublin Road Bus Connects is completed before HSE receive planning permission). Therefore, the Dublin Road Bus Connects project as currently proposed may prejudice the HSE in securing planning permission for the subsequent development of a fourth arm on the Dublin Road/Galway Crystal junction which is enshrined in Objective 4.8 of the GCDP.

In addition to the above, if HSE are unable to deliver the new access to MPUH as per Objective 4.8 of the GCDP, this may have significant implications for the future development potential of the Campus. It may be very challenging to deliver an enhanced regional healthcare service and expanded hospital

services at Merlin Park University Hospital as well as the delivery of key strategic healthcare infrastructure at MPUH (as per Policy 7.8 GCDP), based on the capacity constraints at the existing Dublin Road/MPUH junction.

In summary, the omission of the necessary infrastructure upgrades at the Dublin Road/Galway Crystal junction as required by Objective 4.8, from the Dublin Road Bus Connects project, renders the project inconsistent with the Galway Transportation Strategy and the policies and objective of the Galway City Development Plan 2023-2029. The omission of the full extent of the requisite infrastructure upgrades (provision for fourth arm) may prejudice or preclude the HSE in securing a future planning permission for same. Any development proposal which prejudices or precludes the HSE in securing a future planning permission for a new access may prevent HSE from developing the MPUH Campus in the manner specified by Policy 7.8 GCDP and therefore, the Dublin Road Bus Connects project may be deemed to contravene Policy 7.8. The Board will note that, as per Section 4.3 above, the HSE are engaged in detailed feasibility analysis at present in respect of the provision of the new access to MPUH at the Dublin Road/Galway Crystal junction.

7.2

Boundary Treatments

MKO notes the proposals set out in Chapter 4 of the EIAR for the proposed boundary treatments. Chapter 4 of the EIAR sets out the following -

‘The Proposed Development corridor is bounded by a wide range of established private, institutional, commercial and public land boundaries. While the design development has sought to avoid impacts on such boundaries, the Proposed Development will nonetheless require both temporary and permanent acquisition of lands.

Impacted property boundaries will be reinstated following construction. In some instances, boundaries will be re-built along their original alignments. In other cases, boundaries will be re-built on a new setback alignment. In general, property boundaries will be reinstated on a ‘like for like’ basis, including any walls, piers, fences, railings, gates, driveway finishes and private landscaping. Private grounds that are utilised in part for construction access will be reinstated following completion of the works to match the existing landscaping of the property. Where private grounds are reduced by permanent land take required for the Proposed Development, the remaining grounds will be reinstated to match the landscape and character of the existing grounds in consultation with the property owner.’



The HSE wish to ensure that the BusConnects Dublin Road Galway project includes for consultation with the HSE relating to the boundary treatment and wish to request that Method Statements are provided for comment and review by the HSE, prior to commencement of development. The rebuilding of the existing wall on a like-for-like basis will necessitate careful consideration in terms of dismantling and storage of the existing stone. It is also requested that the use of imported stone be kept to a minimum. In instances where imported stone is necessary, its source and intended use should be agreed through consultation with the HSE.

8.

HSE SUBMISSION TO COMPULSORY PURCHASE ORDER (CASE REF: 321882)

Following a review of the Compulsory Purchase Order (CPO) Maps for the BusConnects Dublin Road Planning Application, we wish to make a submission on the lands which relate to the MPUH campus. Figure 8 below indicates the CPO lands at Merlin Park Hospital and each labelled land parcel is identified in Table 2 below.

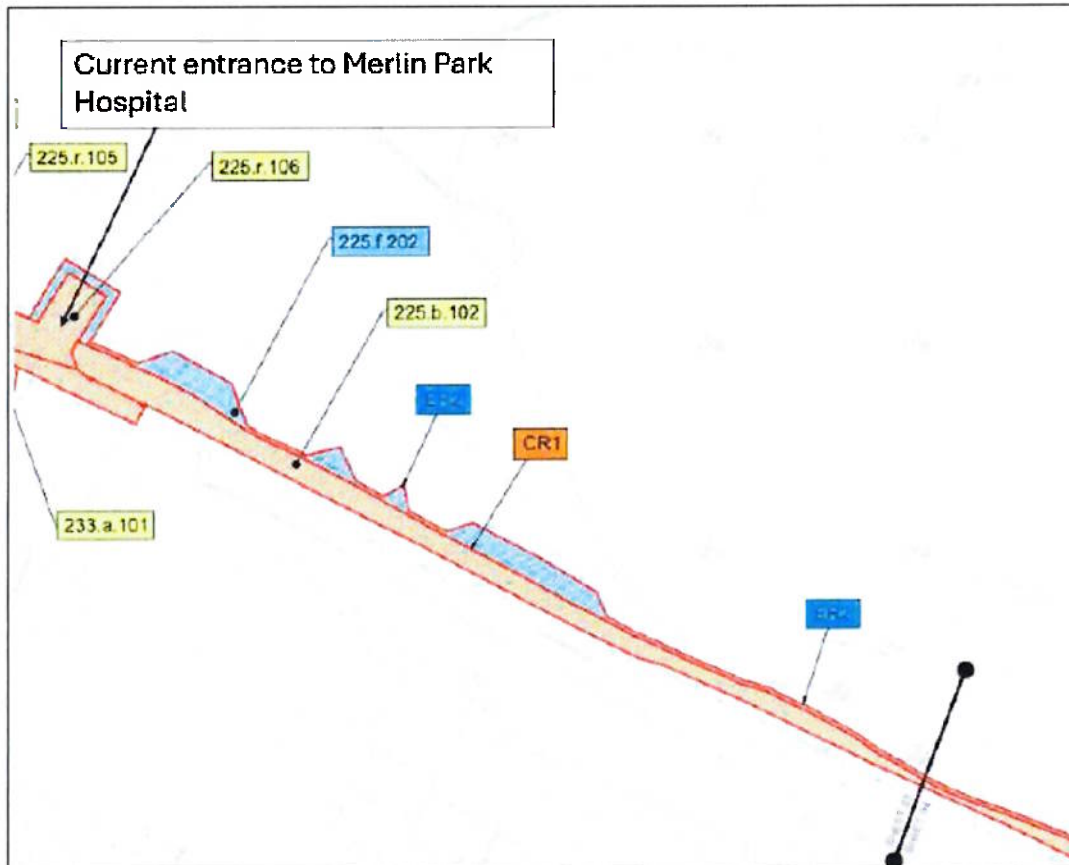


Figure 8 Extract from drawing no. BC/GDR-DM/03 (MKO emphasis included)

The HSE is fully supportive of the scheme in principle and welcomes the enhanced public transport provision in Galway City. However, concerns are expressed that the proposed land take for the BusConnects Project may be insufficient in the context of what our client considers to be the requisite works at the Dublin Road/Galway Crystal junction and as described in Section 7 above i.e. the making of provision for a fourth arm on this junction.

In MKO's view, in order for the planning application for the proposed Bus Connects project to be consistent with the GTS and GCDP, the design of the project must take account of providing for a fourth arm on the Dublin Road/Galway Crystal junction. The provisional design of the fourth arm on this junction, as illustrated in Figure 6 highlights that the CPO land take is insufficient to facilitate provision for an upgraded junction and fourth arm to MPUH. We respectfully request that the Board would confirm this interpretation during the assessment of the subject planning and CPO applications. In the event the Board concluded that this interpretation is correct, the extent of the CPO land take at the interface between MPUH and the Dublin Road/Galway Crystal junction is considered to be insufficient to accommodate the extent of the works required.

On this basis, the HSE wish to seek assurance that the project has adequately accounted for the maximum necessary land requirements, rather than a minimal allocation. The HSE is particularly concerned that, during the delivery phase, additional land may be required to provide for the full extent of upgrade works that are required, potentially triggering a new CPO process. To avoid delays and complications later in the process, the HSE requests that the BusConnects Project thoroughly assess and make provision for the acquisition of the requisite lands as part of this process. These matters should be considered in the context of the narrative set out in Section 7 above.

Table 2: Description of Merlin Park Hospital CPO lands from Compulsory Purchase Order and Schedules

Lands to be compulsorily acquired		Lands to be temporarily acquired	
225.r.106	Footpath & Roadbed owned by Western Health Institutions Board (896.45 sqm)	225.f.202	Access, footpath, grasslands & vegetated area owned by Western Health Institutions Board & Uisce Eireann (2482.37sqm)
225.b.102	Boundary & Vegetated Area owned by Western Health Institutions Board & Uisce Eireann (6740sqm)		
Private Rights to be acquired		Private rights to be temporarily restricted or otherwise interfered with	
CR1	All private rights within the area shaded orange and labelled 'CR1 and CR2' on the deposit map reference BCGDR-DM-03, BCGDR-DM-04 and BCGDR-DM-05 associated with plot references 225.a.101, 225.b.102, 225.c.103, 225.d.104, 225.r.105, 225.r.106 and 225.r.107, as described in Part I of the Schedule.	ER2	All private rights within the area shaded blue and labelled 'ER1, ER2 and ER3' on the deposit map references BCGDR-DM-03, BCGDR-DM-04, BCGDR-DM-05 and BCGDR-DM-06 associated with plot references 225.e.201, 225.f.202 and 225.g.203, as described in Part II of the Schedule.

8.1.1 Temporary Land Acquisition

Following a review of the documentation and mapping submitted as part of the CPO application, MKO note that temporary land take areas are to be reinstated to 'as was' condition. Our client wishes to ensure that the BusConnects Dublin Road Galway Project includes for consultation with the HSE, and that Method Statements for the reinstatement of temporary land take areas are reviewed and approved.

CONCLUSION

The Health Service Executive is supportive in principle of the overall objectives of the BusConnects Dublin Road project, recognising its potential to significantly improve public transport connectivity, reduce congestion, and enhance access to healthcare services, including the Merlin Park University Hospital campus. Improved transport links will benefit patients, staff, and visitors, and align with the HSE's goals for sustainable development and improved public health outcomes. However, while the HSE welcomes the project, it wishes to highlight a number of important concerns raised in this submission. Accordingly, a summary of each of the points are as follows:

- MPUH is a strategic healthcare campus in the west of Ireland experiencing significant growth in recent years. It is imperative for the future overall development in MPUH that provisions for the future fourth arm and junction upgrade should be considered and acknowledged by the BusConnects application.
- BusConnects Dublin Road Galway scheme is inconsistent with the policies and objectives in the Galway City Development Plan, by not acknowledging the planned future access to the MPUH campus. We respectfully request that the scheme is redesigned in accordance with the Galway City Development Plan and Galway Transport Strategy.
- HSE acknowledges the boundary treatment proposals, but requests reassurance that consultation efforts will be made with the HSE, and that Method Statements are reviewed and approved prior to commencement of development.
- It is important to reassess the land take for the CPO, in line with the points raised in this Submission, particularly in relation to the additional lands which may be required for the provision of the new entrance to MPUH.

The HSE looks forward to continued engagement to ensure that the final design appropriately addresses these issues while delivering on the broader benefits of the scheme.



APPENDIX 1

**FEASIBILITY REPORT,
PREPARED BY RHATIGAN
ARCHITECTS**





RHATIGAN
ARCHITECTS

**TITLE: MERLIN PARK
NEW ENTRANCE AND ACCESS ROAD**

INITIAL DRAFT FEASIBILITY REPORT

CLIENT: HSE WEST

JOB: 24027 (RA)

**DATE: REV 01_30 MARCH 2025
REV 02_14 APRIL 2025**

REF: 24027-RP-RHA-AR-00001

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	CONSULTANT REPORTS
C	Initial Draft Report and Proposed Road Layout Drawing (RPS)
D	M+E Report (J.V. Tierney)

1.0

INTRODUCTION

1.1 PURPOSE OF THIS REPORT

This report has been prepared by Rhatigan Architects to condense the findings to date of the Design Team, who are currently developing a Feasibility Report for a proposed new Entrance and Access Road to the Merlin Park University Hospital (MPUH) Campus, Galway for HSE West.

This version of the report has been prepared to accompany a submission to An Bord Pleanála which is being made in response to the proposed BusConnects, Dublin Road Galway Planning Application (ABP Ref: 321776) and Compulsory Purchase Order (Case Ref: 321882). It is also a draft in advance of completing the feasibility report to accompany a capital submission for funding for a proposed new entrance to MPUH from the Dublin Road/Galway Crystal junction, that would incorporate the public transport route include in Galway City Development Plan (GCDP).

The intent of this report is to outline the design and survey work undertaken to date by the Design Team to establish the feasibility of a proposed new Entrance and Access Road for the Merlin Park Campus, Galway.

As per the recommendations in section 3.0 of this report, the contents of this report confirms that the development of a proposed New Entrance and Road to the Merlin Park Campus, Galway is feasible to improve the functionality and accessibility to Merlin Park University Hospital campus, as Service demand necessitates in the fullness of time.

1.2 DESIGN TEAM

Architect



Rhatigan Architects

Block A, Citygate, Connolly Street, Sligo
www.rhatiganarchitects.ie

C+S Engineer



RPS

West Pier Business Campus, Dun Laoghaire, Co. Dublin, A96 N6T7
www.rpsgroup.com

M+E Engineer



J.V. Tierney Consulting Engineers

The Tannery, 53-56 Cork St, Dublin, D08 P92R
www.jvtierney.ie/

PSDP



MKO

MKO, Tuam Road, Galway, Ireland, H91 VW84
www.mkofireland.ie/

QS



Lawlor Burns

81 O'Connell Street, Limerick
www.lawlorburns.com

1.3 ROLE OF MERLIN PARK UNIVERSITY HOSPITAL CAMPUS

Merlin Park University Hospital (MPUH) Campus comprises of an area of 57.74 Hectares. The current land use zoning in the Galway City Development Plan is a mix of institutional and amenity. There are 26.12 Hectares zoned for Community/ Instructional and 31.62 Hectares zoned for recreational/ Amenity use.

The MPUH campus activity/ uses currently be categories broadly in to the following,

- Acute Services
- Non-Acute Services
- Regional/ Corporate support and administration

Acute Services

Galway University Hospitals (GUH) is comprised of both University Hospital Galway (UHG) and Merlin Park University Hospital Galway (MPUH) and is part of the HSE West North West region in the HSE. While UHG and MPUH operate on separate sites, together they form the overarching Galway University Hospitals. They operate in a coherent and integrated manner, UHG site focusing on acute and specialist services where as high volume low complexity elective and ambulatory services are provided at MPUH.

UHG is a Model 4 hospital delivering Emergency / Theatre Services, Critical Care, Cancer and a wide range of Tertiary Referral Services. The hospital is a designated supra regional Centre for Cancer and Cardiac Services. It provides secondary, regional and supra-regional services for the Health Services Executive West and is one of the major academic teaching hospitals in Ireland and is attached to the University of Galway (NUIG) with strong research, education and service delivery links with the university.

MPUH is a Model 2 Hospital delivering non-complex elective Medical, Surgical and OPD Services including Rehabilitation, Renal Dialysis, Orthopaedics, Respiratory, Rheumatology and Interventional Radiology. Recent developments on the Merlin Park site include Phase 1 OPD Building and Adult Cystic Fibrosis which opened in 2025.

In 2019 and update 2022, the Options Appraisal Report developed an overall plan of the high-level infrastructure requirements for a new West & North West hospitals in Galway. The current plan and overall strategy is to develop all acute complex and cancer care on the UHG site and **the high volume / lower complexity care and ambulatory low complex care on the Merlin Park Campus** and to make optimum use of both hospital sites.

Non-Acute Services

Community Nursing Unit - Short & long stay accommodation
Mental Health Service for Children & Adolescents - In-patient and Out-patient clinics
Mental health residence
Dental
Podiatry
Various support service and administration

Regional/ Corporate support and administration:

MPUH also provides administrative support functions for both acute and non-acute services.

Regional Health Office
 Regional/ local Human Resources
 Regional/ local Finance
 Regional/ local Capital & Estates
 Public Health
 Tusla
 The National Ambulance Service base for Galway & the environs
 NAS Regional support services

The total HSE staff number on the campus is circa. 1,500.

Originally opened as a newly built sanatorium for the treatment of tuberculosis patients in 1953, today all MPUH acute, non-acute and administrative services are delivered through this 70+ year old building infrastructure, with the exception of the Ambulance Base (2021), Orthopedic Theatres (2022), Phase 1 OPD Building (2025) and Adult Cystic Fibrosis (2024). The site has many issues with ageing infrastructure and significant challenges regarding capacity and access for patients. A summary of the existing MPUH campus activities by building is outlined in Table 1.1.

Table 1.1 Merlin Park University Hospital Campus Activities by building block / unit

Block A: Corporate Services and Administration	<ul style="list-style-type: none"> • Human Resources, • Nursing Administration, • Emergency Planning, • Pensions, • Recruitment, • Employee Assistance & Counselling. • Consumer Affairs • Health Promotion • Social Care division • Waiting list call centre • Child & Adolescence Mental Health Services (CAMHS) outpatients (Non acute) • Cardiac Rehab, (Acute)
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Block B Corporate and Acute / Non-Acute Support Services	<ul style="list-style-type: none"> • Education Centre, • Board room • Community Healthcare West (CHO) • Library Services, • National Ambulance Service, • Pharmacy, • Canteen, • Stores, • TUSLA, • Hospital Management, • Patient Accounts • Transport • Estates west regional office
Block C Acute Services	<p>Hospital Ground – Acute Rehabilitation - 14 inpatient beds</p> <p>Hospital One - Medical - 18 inpatient beds & 10 day-case spaces</p> <p>Hospital Two</p> <ul style="list-style-type: none"> – Orthopaedics - 21 inpatient beds & 4 day-case spaces – Post Anaesthetic Care Unit (PACU) 4 inpatient beds – Pre – Orthopaedic Assessment Clinic <p>Radiology</p> <ul style="list-style-type: none"> • Orthopaedic Theatres
Unit 1 Acute OPD	<ul style="list-style-type: none"> • Medical outpatients • Home Renal Therapies. • Rheumatology Infusion ward
Unit 2 Acute OPD	<ul style="list-style-type: none"> • Orthopaedics Outpatients • Casting department • Physiotherapy.
Unit 3 - Non Acute Clinics	<ul style="list-style-type: none"> • Podiatry Outpatients, Theatre & NUI Teaching School • Limb fitting clinic
Unit 4 - Stroke Unit	<ul style="list-style-type: none"> • Rehabilitation - 20 inpatient beds
Unit 5 - Non Acute	<ul style="list-style-type: none"> • Community Nursing Unit - 26 inpatients beds
Unit 6 - Non Acute	<ul style="list-style-type: none"> • Community Nursing Unit - 26 inpatients beds
Unit 7 - Acute	<ul style="list-style-type: none"> • Renal Unit & Dialysis

Unit 8 - Acute	Respiratory Unit <ul style="list-style-type: none"> - Bronchoscopy/ Pulmonary Function Diagnostics. - Respiratory OPD - Physiotherapy
Unit 9 & 10 Non Acute Services	Community based units <ul style="list-style-type: none"> - Orthodontics - Mental Health Services, - Alzheimer's Day Care Centre, - Irish Wheelchair Association, and - Training Centre
Admissions: Acute	<ul style="list-style-type: none"> • Medical Records, • Admissions, • Waiting List, • HIPE
Finance Building RHO Local and Regional Services	<ul style="list-style-type: none"> • Finance • Primary Care, • TUSLA, • Public Health • Information Services
New Outpatients (OPD) Phase 01 2025 - Acute	<ul style="list-style-type: none"> • Plastics, Oral and Maxillofacial, Gastroenterology, Vascular, Oncology, Haematology, Geriatrics, Cardiothoracics, Respiratory, Cardiology, Neurology, Phlebotomy
Acute Mental Health	<ul style="list-style-type: none"> • Child & Adolescence Mental Health Services (CAMHS)
Ambulance Base	<ul style="list-style-type: none"> • NAS Galway City and Environs
Other buildings on site	<ul style="list-style-type: none"> • Shop and Dental Clinic, • Internal Audit, • Maintenance, • Estates, • Church • Imaging Centre,

A summary of the existing inpatient capacity at Merlin Park Hospital is given in Table 1.2 below and a map of the existing Hospital Campus is shown in Figure 1. This shows that there are 155 inpatient beds available, 56 of those are dedicated to non-hospital activity and located in the Community Nursing Unit (CNU) at Unit 5 and Unit 6.

Table 1.2 Inpatient capacity

HOSPITAL	BEDS
Hospital Ground	19 inpatient beds & 4 further beds available
Hospital One	21 inpatient beds & 4 day-case spaces

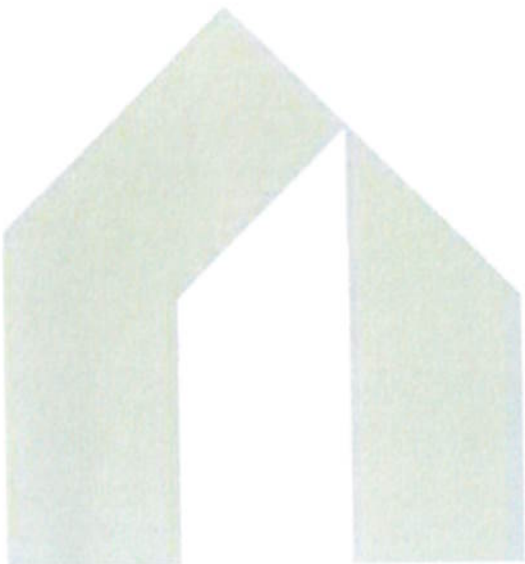
Hospital Two	21 inpatient beds & 4 day-case spaces
PACU	4 inpatient beds
Unit 4	20 inpatient beds
Unit 5 (CNU – non-hospital)	20 Residential beds
Unit 6 (CNU – non-hospital)	20 Residential beds
Child and Adolescent mental health Unit	20 inpatient beds
Unit 9A	15 Residential beds

Recent developments on the MPUH site include a new two storey Phase 1 OPD Building and single storey Adult Cystic Fibrosis building, which have opened within the past six months. The Galway Surgical Hub is currently under construction and will be completed in 2026. Design teams are appointed and working on designs for the Phase 2 OPD, new car parking facilities and the Elective Hospital to be developed on the MPUH. All projects are expected to be delivered within the next 5 years.

As the delivery of healthcare services is intended to be largely split with acute in UHG and elective MPUH, the approach of taking elective care out of the congested city centre makes elective care more accessible to the wider community. Hence, in order to cater for the increase in staff and patient visitors to MPUH, there will be a need to improve access, developed mobility planning and a proposed new entrance will be required in time to support increases these objectives. This initial version of the Feasibility Study and enclosed documents, outline information related to a proposed new entrance to MPUH at the Dublin Road/Galway Crystal junction.

2.0

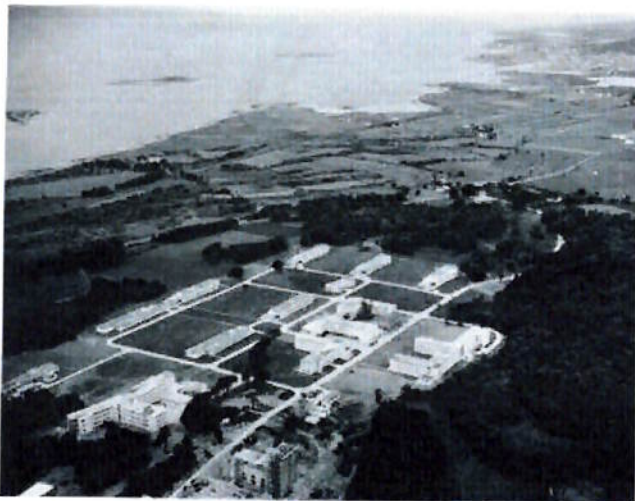
SITE & CONTEXT



2.1 ORIGINAL CAMPUS LAYOUT

Originally opened as a newly built sanatorium for the treatment of tuberculosis patients in 1953, today Merlin Park University Hospital (MPUH) is an acute Model 2 hospital offering a comprehensive range of services for elective and scheduled care on an In-patient, Outpatient and Day Care basis for both Acute and Non-Acute patient care. It also provides corporate and administrative support for both acute and non-acute Services, in addition, to regional and corporate functions.

The image below shows the extent of building infrastructure in 1953. As previously noted in this report, the majority of MPUH are delivered through this ageing infrastructure. The campus suffered from minimal investment until very recently when the Ambulance Base (2021), Orthopedic Theatres (2022), Phase 1 OPD Building (2025) and Adult Cystic Fibrosis (2024) were opened. Further significant investment will follow in the near future, the extent of which can be seen in Section 2.2 below.



'Our aerial photograph was taken in 1953 by a Captain Morgan and was kindly given to us by the National Library. It is interesting as it shows the Merlin Park Hospital complex still being built, but also some of the surrounding hinterland. There are almost no buildings evident in the top half of the photograph which extends all the way to Lough Athalia, the areas of Renmore and Roscam are shown as green fields.'
source - www.kennys.ie

2.2 CAMPUS MASTERPLAN

In recent years a Spatial Plan was developed to document the current and proposed infrastructure investments likely and planned for the MPUH campus. The Spatial Plan was developed to test the site in advance of a comprehensive medical planning exercise currently underway. This information is required to underpin a Development Control Plan (DCP) for the campus over the next 20 years. The Spatial Plan is shown in the following image below and provided in Appendix A1 of this document.

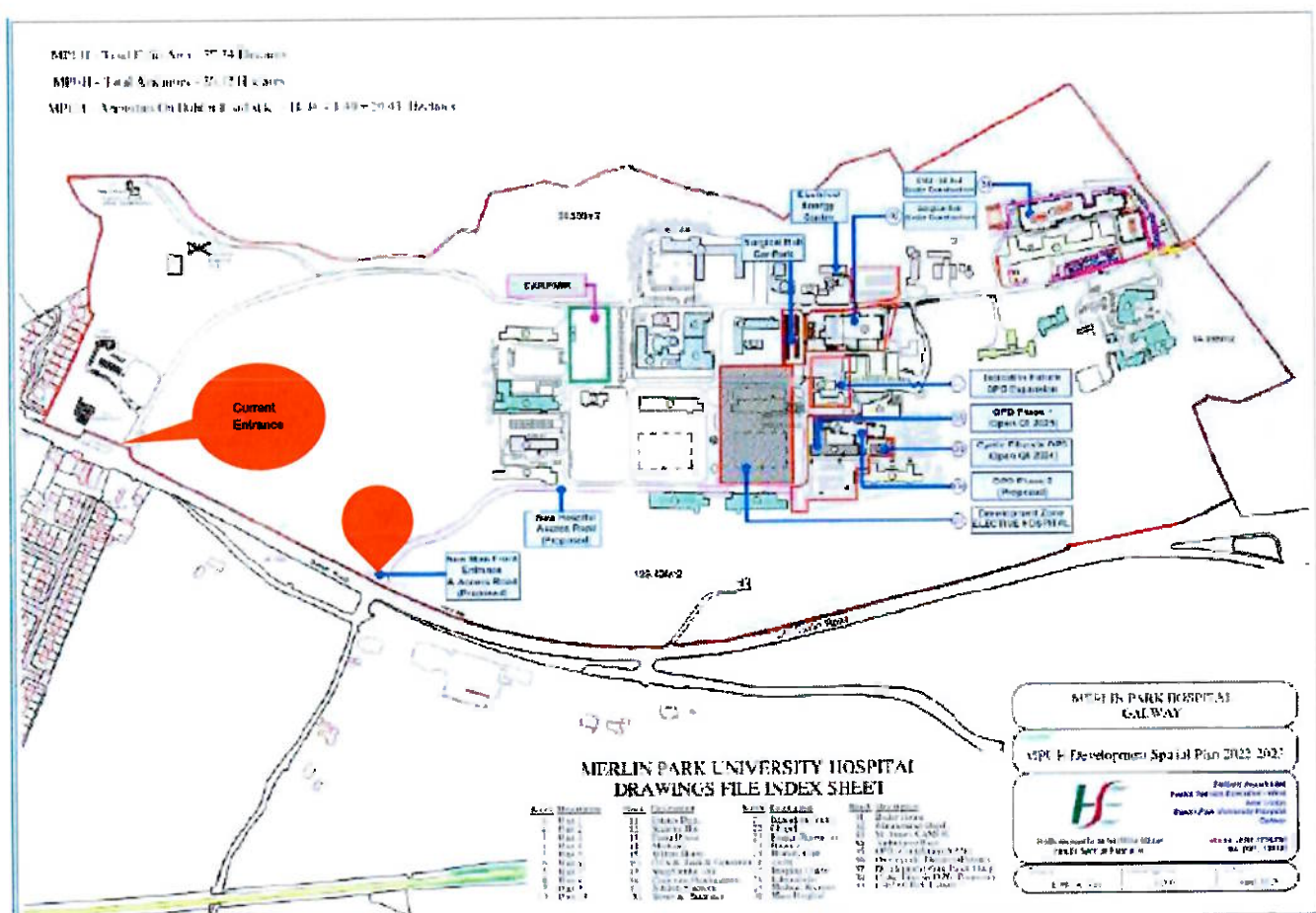
To facilitate MPUH's transformation into a Regional Elective Care site providing ambulatory and high volume low complexity care for the people of Galway and the North-West Region, in addition, to its non-acute and regional/ corporate support functions, the Medical/ Clinical Planning exercise which includes demand/ capacity analysis commence March 2025.

High-level functional area estimates for various elements/ developments shall be developed based on the analysis of existing activity, future population growth, national clinical projections, national strategy for delivery of Services, health building/ facilities guidance and some key assumptions such as adjacency requirements, to establish the essential

components and their size that will inform the Development Control Plan exercise and final DCP Report for the campus. Further modelling and engagement is currently underway to refine data that contributes to a detailed schedule of accommodation and a functional brief, supporting the ongoing development of the MPUH site/ campus. This is currently being progressed and it is planned to have a draft functional brief May/ June 2025.

The location of a proposed entrance and access road to the campus, which is the subject topic for this Initial draft Feasibility Study is also note for the DCP brief. Also included below, in tabulated format, is a summary of the major capital projects that will become operational on the campus along with the expected opening date after which time operational activity could be incrementally brought on stream.

CAMPUS DEVELOPMENT SPATIAL PLAN SHOWING LOCATION OF PROPOSED ENTRANCE



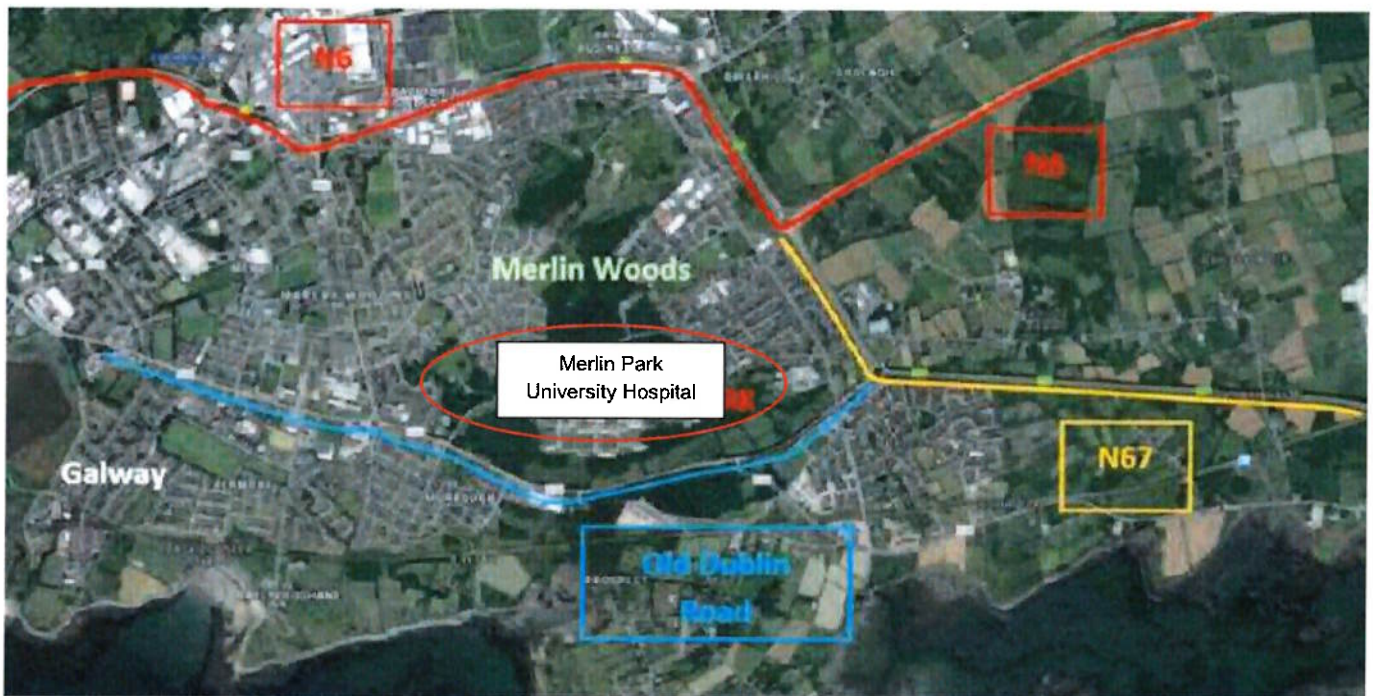
Development	Use	Size (sqm)	Status	Proposed Opening Date
Surgical Hub	The Surgical Hub is intended as a Regional Hub, serving the wider catchment of Galway City, Ireland's fourth largest urban centre by population and the wider West Region particularly, encompassing Galway, Roscommon and Mayo and potentially the North West of the area. The facility will support decongestion on the UHG site.	4,330 sqm	Construction ongoing	2026
60 Bed CNU	A two storey, part single storey Community Nursing Unit (CNU) with 60 en-suite bedrooms, including a 10-bed dementia unit in the single storey block. There are plans to further extend this with a Phase 2 development, adding another 50 / 60 beds.	5,165 sqm	Construction ongoing	2026
Phase 1 & 2 – Outpatients Department	Phase 01 and the proposed Phase 02 OPD buildings in MPUH will to help decongest the UHG site, particularly in and around the existing Emergency Department (ED) location. This will allow OPD patients to receive the necessary care away from the Acute Hospital environment at UHG.	Phase 1: 2,325 sqm Phase 2: 3,400 sqm	Phase 1: Complete Phase 2: Stage 1 Design Development	Phase 1: Q1 2025 Phase 2: 2029
Elective Hospital	The Elective Hospital will support the separation of scheduled and unscheduled care, reduce cancellations and address lengthy waiting lists for elective procedures. Separating acute and non-acute services through this purpose built elective facility will also greatly improve efficiency. Procedures in the new elective hospital will be high volume, low-to-medium complexity surgeries which can be efficiently planned with dedicated theatres provided.	22,000 sqm	Stage 1 Preliminary Design / Masterplan	2030
Electrical Infrastructure Upgrade	The HSE/MPUH have carried out a review of their electrical infrastructure, at Merlin Park University Hospital Campus, in advance of proposed future developments of the healthcare facilities on the campus. This review identified that the existing Transformer and Ring Main Unit (RMU) arrangements needed urgent upgrading, and that this upgrade should not await future projects are complete.	Transformer Room: 60.82 sqm RMU Room: 27.32 sqm	Complete	Open 2024/2025
District Heating Upgrade	The Merlin Park University Hospital (MPUH) campus comprises of currently 37 No. existing buildings and currently two buildings in construction and two further buildings in the development stage. HSE are proposing to upgrade and future proof the existing Campus	n/a	Design Build Design Development	(TBC)

	District Heating and Hot Water Network Systems with the development of a new centralised Campus District Heating Network System to serve all space heating, hot water generation and auxiliary thermal loads of existing and proposed buildings on the campus. In addition it will allow for future potential connections to a City District Heating Network			
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2.3 EXISTING ROAD OVERVIEW

Access to the site is via the main entrance off the Old Dublin Road, with restricted access available at the east of the site from Merlin Park Lane. The image below shows the site in the context of the surrounding road infrastructure. As the strategy is to develop the MPUH campus for high volume / lower complexity care, the approach of taking elective care out of the congested city centre makes elective care more accessible to the greater western region.

How staff and patients travel to the site following the opening of new future facilities noted in the proposed spatial plan, will be a key consideration in the design for the new entrance. The civil and structural report, contained in Appendix C, will provide further detail on trip analysis and how this will influence the design for a new entrance to MPUH at the Dublin Road/Galway Crystal junction.



Existing road network around Merlin Park

2.4 SURVEYS UNDERTAKEN

General summary of Surveys Completed

<u>Survey</u>	<u>Company</u>	<u>Date</u>	<u>Appendix</u>	<u>Status</u>
<u>Topographical</u>	Apex Surveys Limited	January 2025	Appendix B1	Complete
<u>Ecological Constraints Report</u>	MKO Planning and Environmental Consultancy	January 2025	Appendix B2	Complete
Arboricultural Survey	CMK Horticulture & Arboriculture	April 2025	Appendix B3	Complete
Cultural Heritage Impact Assessment	Moore Group	December 2025	Appendix B4	Complete
Traffic Surveys	RPS	April 2025	Appendix C	Complete

Ecological Constraints Report

Appendix B2

Carried out by MKO Planning and Environmental Consultancy

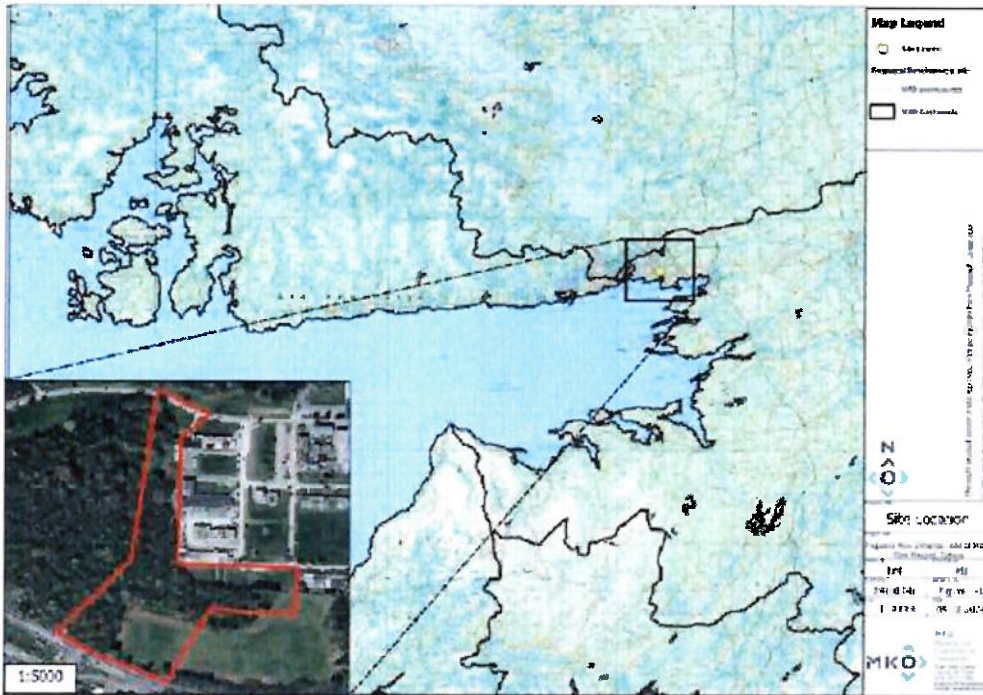
January 2025

Summary

An ecological constraints assessment has been prepared by MKO on behalf of the Health Service Executive (HSE). The assessment has been undertaken to identify the main ecological constraints associated with the Study Area of a proposed New Entrance Road at Merlin Park Hospital located in Co. Galway. The aim of this report is to present the main findings of ecological site visits undertaken by MKO to identify the main ecological constraints associated with the development of the Study Area.

The assessment is based on a desk study carried out in November 2024 and site visit undertaken on 15/11/2024. The desk study and site visit were carried out to identify high-level ecological constraints on the Study Area in order to inform the design of any future proposals for the Study Area and thus minimise impacts on biodiversity and planning risk. The site visit also aimed to inform what further targeted habitat and species surveys would be required in support of an ecological impact assessment of proposal for the Study Area.

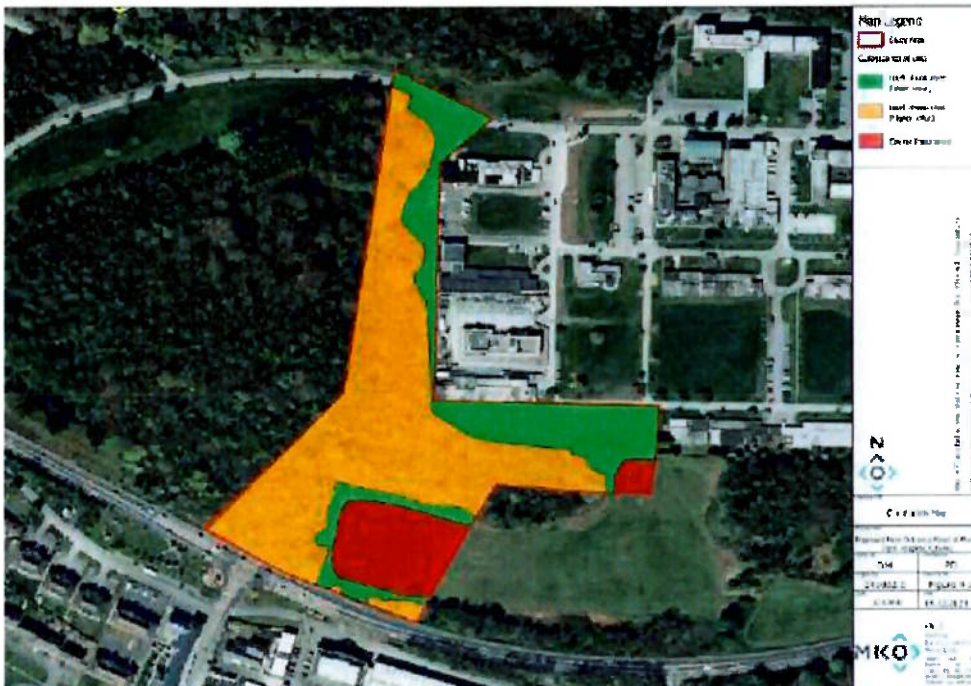
This report includes a resulting, high-level habitat constraints map and provides information on ecological site conditions and ecological constraints for the surveyed area. Detailed habitat mapping and detailed ecological surveys will need to be undertaken to inform any Natura Impact Statement (NIS) and Ecological Impact Assessment (EcIA) for proposals at the Study Area. Recommendations on further ecological surveys are also included within the report.



Site Location (extract from Ecological Constraints Report)



Article 17 Habitat Map (extract from Ecological Constraints Report)



Ecological Importance Map (extract from Ecological Constraints Report)
CONCLUSION

The main ecological constraints are habitats of Local Importance (higher value) and County Importance which were identified within the Study Area. Regarding fauna, the Study Area provides supporting habitat for bird species of SCI for the Inner Galway Bay SPA, as well as potential, breeding, foraging and commuting habitat for badger and bats.

Any future development should aim to avoid the loss of any habitats assessed as being of Local importance (higher value) or higher. The loss of any Annex I habitat of the EU Habitats Directive would carry high planning risk, as this would be in contradiction to the Galway City Development Plan 2023- 2029. Whilst there are no significant risks associated with development in areas assessed as being of Local Importance (higher value), it is recommended that loss of these habitats within the Study Area is minimised through sensitive design. The proposal should also provide for the enhancement/creation of habitats to ensure a positive impact on biodiversity.

The Study Area provides potential suitable foraging, commuting, and/or breeding habitats for several protected species and therefore, target surveys should be undertaken to inform a robust impact assessment, as per Section 5 of this report.

Should significant supporting habitat or any breeding sites for any protected species be recorded and should the potential for significant impacts be identified as a result of a Proposed Development, avoidance and/or compensation mitigations must be provided, and a derogation licence from NPWS may also be required to proceed an application. Note, should a derogation licence be required for any species, this must be obtained and submitted with the planning application. Precautionary precommencement and supervision mitigations should also be provided, prior and during construction and operation.

As the study Area is located 0.29km and 0.37km from the Galway Bay Complex SAC and Inner Galway Bay SPA, respectively, designated sites under the EU habitats Directive, any future proposals for the Study Area must fully assess potential for impacts on European Sites with the provision of an Appropriate Assessment Screening report and/or Natura Impact Statement

Arboricultural Survey

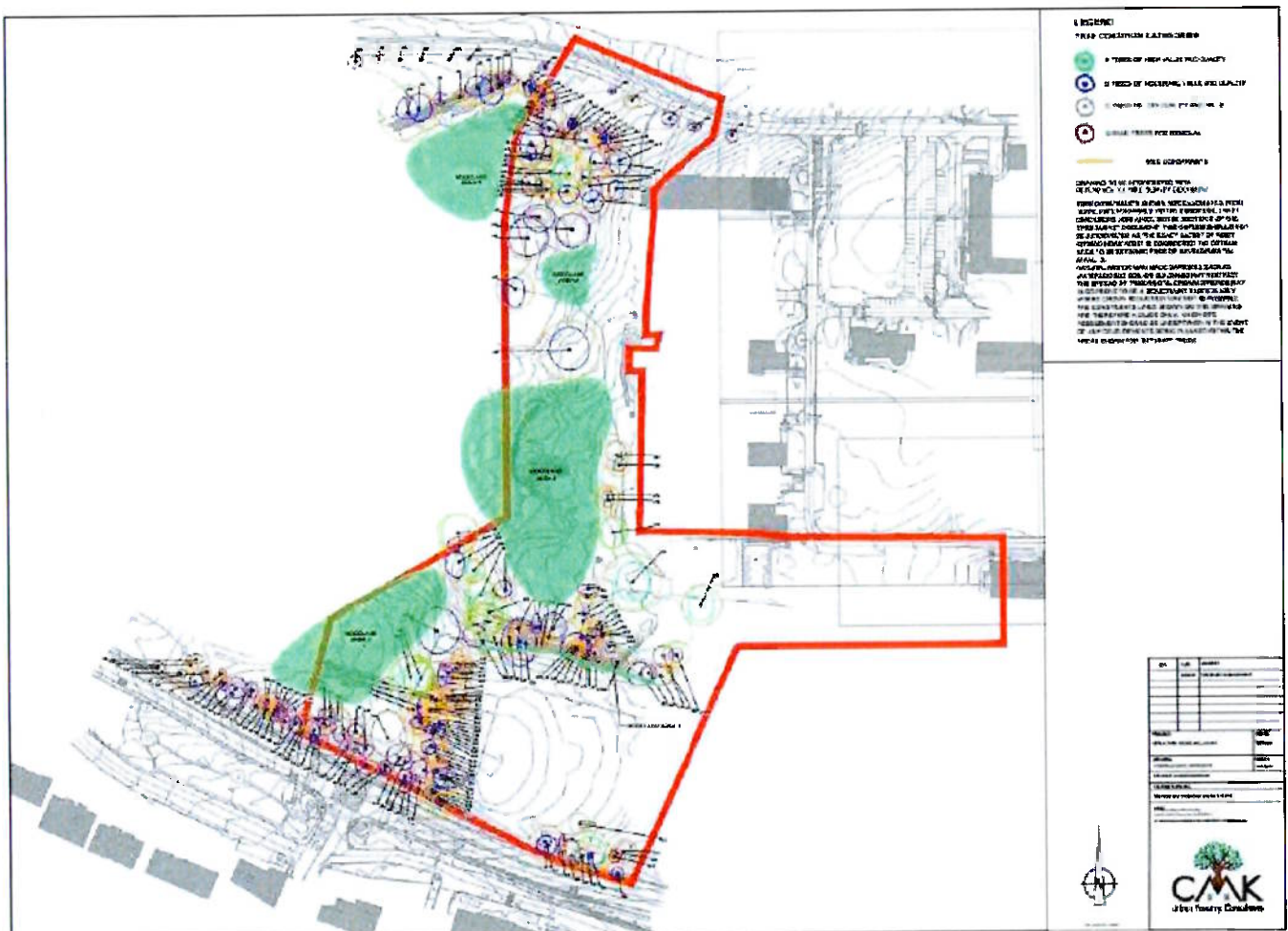
Appendix B3

Carried out by CMK Horticulture & Arboriculture

April 2025

Summary

An Arboricultural Survey of the proposed site has been carried out by CMK Horticulture & Arboriculture. This survey, which identifies the trees on the site relative to their value and quality will be further reviewed and developed in conjunction with the design of the new entrance and access road with a view to retaining trees of high quality. CMK Horticulture & Arboriculture will also be preparing a *Tree Protection Method Statement* to accompany the future planning submission for the New Entrance and Road.



Cultural Heritage Impact Assessment

Appendix B4

Carried out by Moore Group

December 2025

Summary

Moore Group was commissioned to complete a cultural heritage impact assessment of a proposed new entrance and access road at Merlin Park Hospital, Galway City as described herein. This subject site is in agricultural grazing land, the boundaries of which are demarcated by mature trees and hedgerows.

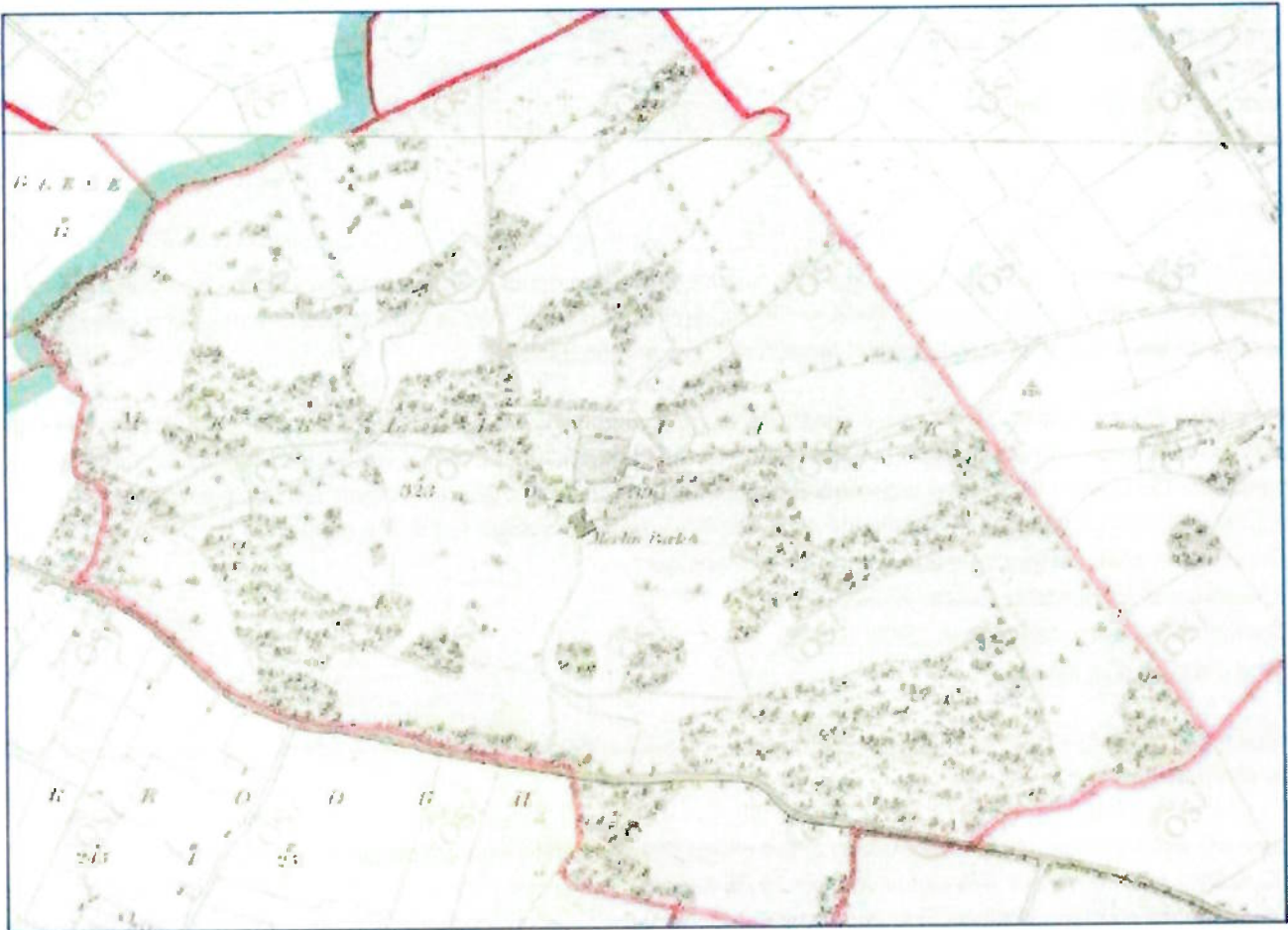
This study aims to assess, as far as reasonably possible from existing records, the archaeological and cultural heritage environment (hereafter referred to as cultural heritage environment or cultural heritage resource), to evaluate the potential or likely impacts that the proposed development will have on this environment and, where appropriate, to suggest mitigation measures to ameliorate potential impacts, in accordance with the policies of:

- Department of Housing, Local Government and Heritage.
- The National Monuments Acts (1930-2005).
- Galway City Development Plan (2023 - 2029).
- Best practice guidelines.

Following on from this, the residual impact that the proposed scheme will have on the baseline environment is identified and evaluated.

There are two recorded monuments within 200m of the proposed development and a further site within the grounds of Merlin Park. These include Merlin Park tower house and Sheela Na Gig (GA094-023 & 023001), a 19th century House (GA094-028) which is no longer extant, an associated designed landscape (GA094-024). The proposed development is with the overall designed landscape and roughly 50 north of the centre point of GA094-024. There is no NIAH or RPS sites within the immediate vicinity of the proposed development. The nearest RPS sites are RPS – 5901- Merlin Castle/Merlin Park Castle located 450m to the north and RPS – 5902 - Two c. 17th century gravestones, both inscribed, one dated 1650 located roughly 350m to the northeast.

The subject site lies within the demesne lands (NIAH Site ID: 5343) associated with Merlin Park House (no longer extant).



The demesne of Merlin Park is featured on the OS first edition 6" mapping, sheet no 094 dated 1829- 1841. Merlin Park demesne was originally developed by Mr. Charles Blake in the early 19th century before being acquired by the State in 1945. The original demesne has been much altered since to accommodate the existing hospital.

3.1 Mitigation Measures

It is recommended that archaeological monitoring of the subject site in areas where excavation/disturbance is anticipated be carried out.

A suitably qualified archaeologist should be appointed to advise the design team on archaeological matters, liaise with the relevant authorities, prepare an archaeological licence application and method statement, and complete the archaeological monitoring work. Monitoring should be carried out under licence to the National Monuments Service at the DHLGH. The application for such a licence requires a detailed method statement, outlining the procedures to be adopted to monitor, record, and recover material of archaeological interest during such work.

3.2 Residual Impact Assessment

3.2.1 Construction Phase

There will be no significant residual impacts on the archaeological resource.

3.2.2 Operational Phase

Not applicable to the archaeological and architectural resource.

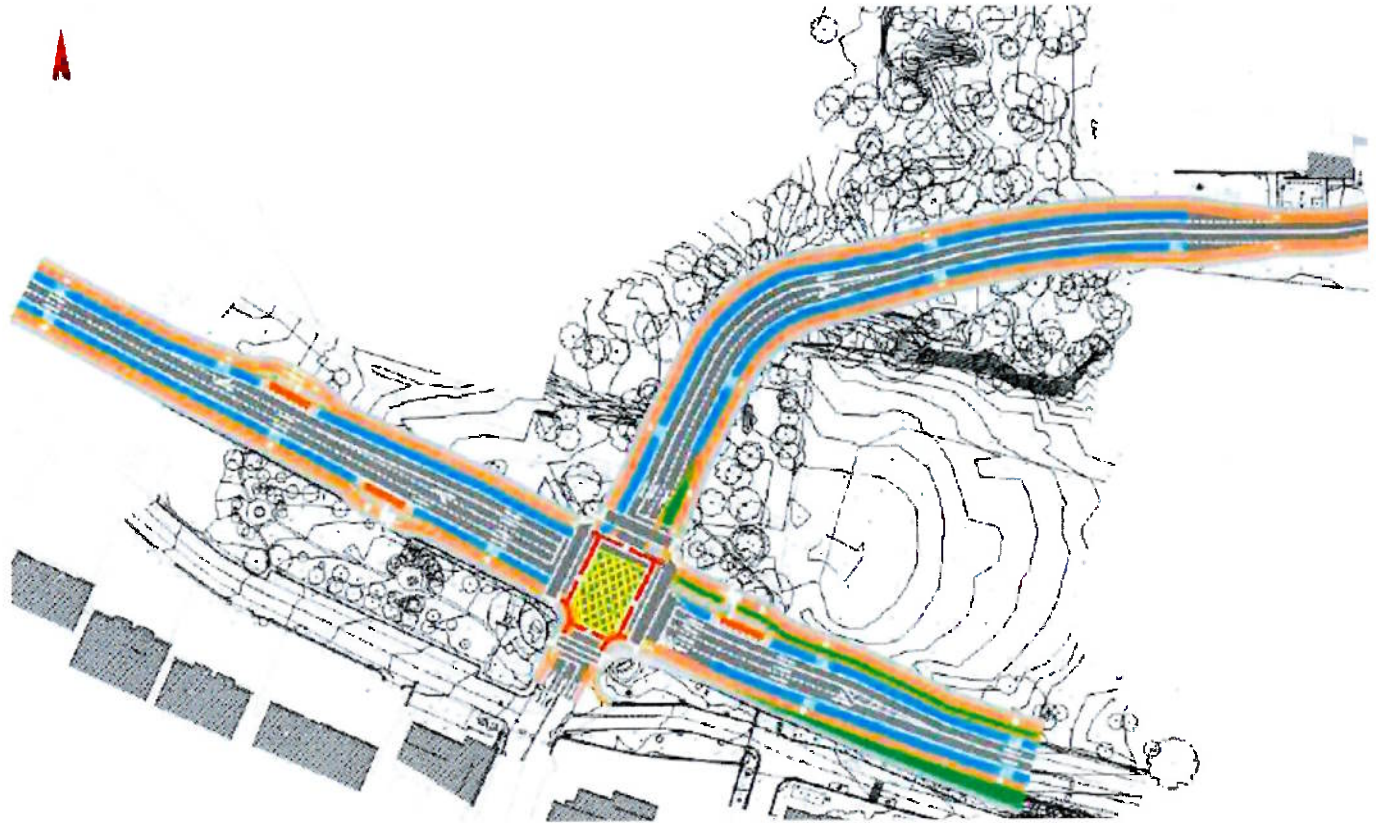
3.2.3 Summary of Post-mitigation Effects

There are no predicted residual impacts on the archaeological resource.

3.2.4 Cumulative Residual Effects

No cumulative impacts have been identified upon the archaeological resource and as such there will be no residual cumulative effects.

2.5 PROPOSED NEW ENTRANCE & ROAD – DESIGN

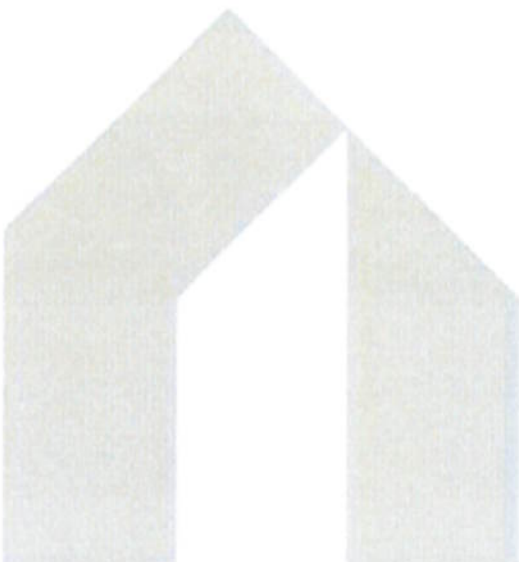


RPS are carrying out the civil and structural (CS) aspect of the Feasibility Study for the new entrance and access road to MPUH from the Dublin Road/Galway Crystal junction. The CS assessment forms part of this overall Feasibility Report, led by Rhatigan Architects, and is appended within Appendix C of this document. The image above shows an indicative Draft layout of the entrance and access road required.

It must be noted that the Feasibility Study and document / drawing provided in Appendix C is an abbreviated version to inform the Bus Connects submission. The Final version of the Feasibility Study, including the CS report, is programmed for completion over the 2025 summer months.

3.0

RECOMMENDATIONS



3.1 RECOMMENDATIONS + NEXT STEPS

Based on the design and survey work carried out to date, the contents of this report confirm that the development of the proposed new entrance and access road from the Dublin Road/Galway Crystal junction to the Merlin Park University Hospital campus, is feasible.

The proposed new entrance and access road will greatly improve the campus infrastructure and access as the campus develops over the coming years, and is aligned with the Galway City Development Plan 2023-2029 which includes provisions to support the expansion of MPUH, as well as the development of a new entrance road which will aid to facilitate the hospital's growth.

Rhatigan Architects note that the project has the potential to have a positive impact on the biodiversity of the site, the HSE will work closely with Ecologists to ensure mitigation to any biodiversity loss or impact and will seek to improve opportunities for biodiversity within the Merlin Park site as part of the development of the new entrance and access road.

The next step in the process is to complete the feasibility study stage design and survey work for presentation to the HSE.

The Final Feasibility Report will include additional Traffic, Arboricultural, Health and Safety and Cost Inputs.

On the basis that this project is expected to proceed beyond Feasibility Stage the Design Team have put together the following non-exhaustive list of surveys which may be required as the project progresses;

General summary of Surveys to be Reviewed / Completed prior to Planning Submission

<u>Survey</u>	<u>Company</u>	<u>Date</u>	<u>Appendix</u>	<u>Status</u>
Topographical	Apex Surveys	January 2025	Appendix B1	Draft complete
Ecological Constraints Report	MKO	January 2025	Appendix B2	Draft complete
Arboricultural Survey Drawings	CMK Horticulture & Arboriculture	April 2025	Appendix B3	Draft complete
Cultural Heritage Impact Assessment	Moore Group	December 2025	Appendix B4	Draft complete
Traffic Surveys	RPS	April & May 2025	Appendix C	Pending
Road Quality Audit	To be undertaken prior to Planning Submission			
Traffic and Transport Assessment (TIA)	To be undertaken prior to Planning Submission			
Local Authority Traffic Counts	Latest annual count to be incorporated into TIA modelling.			
Road Safety Audit	To be undertaken prior to Planning Submission			
Mobility Management Plan/ Travel Plan	To be undertaken prior to Planning Submission			
Flood Risk Assessment	To be undertaken prior to Planning Submission			
Environmental - Habitat Survey	To be undertaken prior to Planning Submission			
Environmental - Bird Survey	To be undertaken prior to Planning Submission			
Environmental - Non-volant Mammals Survey	To be undertaken prior to Planning Submission			
Environmental - Bat Survey	To be undertaken prior to Planning Submission			

Environmental - Appropriate Assessment	To be undertaken prior to Planning Submission
Environmental - Natura Impact Survey	To be undertaken prior to Planning Submission
Arboricultural Assessment and Impact Report	To be undertaken prior to Planning Submission
Tree Protection Method Statement	To be undertaken prior to Planning Submission
Landscape and Visual Impact Assessment (LVIA).	To be undertaken prior to Planning Submission
GPR	To be undertaken prior to Planning Submission
Ground Investigation	To be undertaken prior to Planning Submission
Construction and Environmental Management Plan	To be undertaken prior to Planning Submission
Construction Demolition Waste Management Plan	To be undertaken prior to Planning Submission
Construction Traffic Management Plan	To be undertaken prior to Planning Submission

MERLIN PARK UNIVERSITY HOSPITAL NEW ENTRANCE AND ACCES ROAD

INITIAL DRAFT ENGINEERING FEASIBILITY ASSESSMENT



IE001123
Initial Draft Feasibility
Assessment
D01
15 April 2025

INITIAL DRAFT FEASIBILITY ASSESSMENT

Document status

Version	Purpose of document	Authored by	Reviewed by	Approved by	Date
D01	Initial Draft	MF	Initials	Initials	[Text]

Approval for issue

Initials [Date]

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Prepared for:

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EXECUTIVE SUMMARY

RPS are carrying out a Feasibility Assessment for the construction of a new access road to the Merlin Park University Hospital in Galway City on behalf of the Health Service Executive (HSE). This initial draft Feasibility Assessment forms part of an overall Feasibility Report, led by Rhatigan Architects on behalf of the HSE.

The Galway City Development Plan (GCDP) 2023-2029 provides for a new public access route to Merlin Park University Hospital (MPUH) at the Dublin Road/Galway Crystal junction. The HSE are carrying out a feasibility study for a new entrance at this location alongside Specific Objective 4.8 provided for in the GCDP, which states: *"Facilitate a new access to Merlin Park Hospital from the Dublin Road"*.

In time, the proposed new access road aims to increase junction capacity to MPUH from the Old Dublin Road. This requirement has been identified in the BusConnects Environmental Impact Assessment Report – Chapter 06 Traffic and Transport document.

At this stage the assessment has been a desktop study using available LA/TII and HSE survey information, along with the proposed BusConnects project improvements to the adjacent road network.

This initial assessment concludes the following;

1. **Traffic Impact:** This assessment will be informed upon receipt of most recent LA/TII traffic count data on the Old Dublin Road, in addition to HSE traffic count surveys due to be carried out in Q2 and Q3 2025. Further information will also be included that determines the future traffic generated by planned developments and service expansion at the MPUH campus.

2. **Sustainable transport accessibility**

With a proposed new road for MPUH at the old Dublin Road/Galway Crystal junction;

- The proposed location will reduce the walking times and distances from MPUH to high frequency bus services planned under the BusConnects project.
 - The proposed location will include new segregated, bus, walking and cycling facilities which would tie into a network of the same infrastructure along the Old Dublin Road proposed under the BusConnects project. It will also connect to the BusConnects Cross City Link proposals. A new access road should reduce journey times and distances from the Old Dublin Road to MPUH that will make walking and cycling a more attractive mode of transport.
3. **Buildability with consideration of topography:** Using topographical survey data, the construction of the proposed new access road to current gradient standards is considered to be technically feasible.
 4. **Buildability with consideration of impact on surrounding infrastructure:**
 - The assessment of the proposed new access road's impact on the existing road network and planned upgrades to this network as part of BusConnects proposal, is satisfied that the construction of this new access road is technically feasible without negative impact on existing and proposed BusConnects infrastructure.
 - Consideration was also given to the impact of the proposed new access road on the existing sewer network. Opportunities have been identified for the creation of nature-based SuDS that could reduce the effects of the surface water runoff from the proposed new paved area. The proposed new access road is considered to be technically feasible without major impact on the sewer infrastructure.
 - A proposed new access road can be constructed with minimal impact on the existing hospital infrastructure and operation.
 5. **Buildability with consideration of ground conditions:** A map based assessment was carried out to gain an understanding of the existing ground conditions in the area proposed for the construction of the

INITIAL DRAFT FEASIBILITY ASSESSMENT

proposed new access road. The construction of the new access road is considered to be technically feasible within the ground conditions. A detailed site investigation will be required prior to the design of the proposed access road to ascertain the requirement for the construction.

6. **Impact on utilities:** There are no requirements for major utility diversions required as a result of the construction of this proposed new access road.

An initial draft layout of a proposed junction and access route has been developed, based on the above assessments and environmental considerations. This is shown in Figure 0-1.

Figure 0-1 Initial Draft Layout for Dublin Road/Galway Crystal Junction



1 INTRODUCTION

RPS have been commissioned by the Health Service Executive (HSE) to carry out a Feasibility Study for the civil engineering construction requirements for a proposed new access road.

1.1 Purpose of this Report

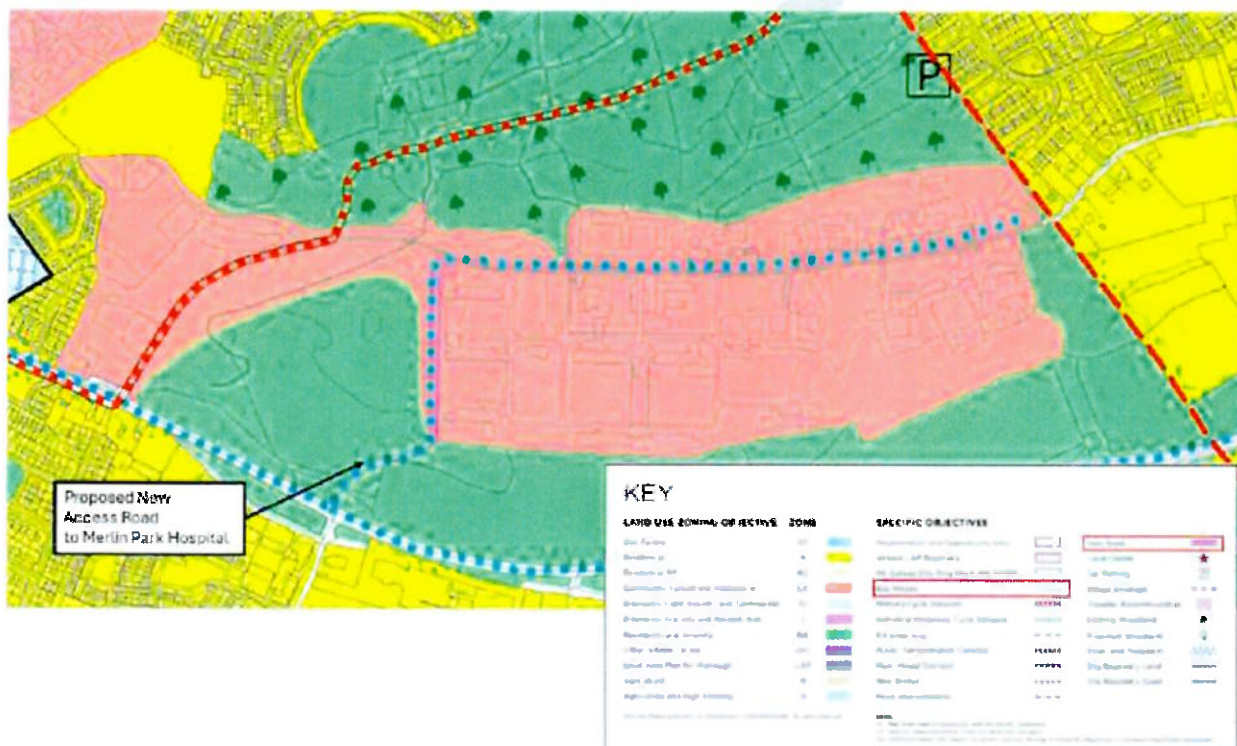
This Report has been carried out to form part of an overall Merlin Park New Entrance Road Feasibility Report, being led by Rhatigan Architects on behalf of the HSE. This Report addresses the technical feasibility of the construction of a new access road at the Dublin Road/Galway Crystal junction to the MPUH.

This report will consider;

1. Traffic Impact.
2. Sustainable transport accessibility.
3. Buildability with consideration of topography.
4. Buildability with consideration of impact on surrounding infrastructure.
5. Buildability with consideration of ground conditions
6. Impact on utilities.

The Galway City Development Plan (GCDP) 2023-2029 also provides for a new public access route at the Dublin Road/Galway Crystal junction. The HSE are carrying out a feasibility study for a new entrance at this location alongside Specific Objective 4.8 provided for in the GCDP, which states: *“Facilitate a new access to Merlin Park Hospital from the Dublin Road”*.

Figure 2-1 Land Use Zoning and Specific Objectives Map Extract from Galway City Development Plan 2023-2029



2.1 Technical Feasibility of Solution

2.1.1 Traffic Impact

New traffic counts are currently being procured on the Old Dublin Road and the internal road network within MPUH. These traffic counts are being taken at a time when the Phase 1 Outpatients Department is in operation and will supersede previously available traffic counts undertaken at this location.

2.1.1.1 Traffic Growth

The main future developments within MPUH considered are;

1. Surgical Hub.
2. 60 Bed Community Nursing Unit.
3. OPD Phase 2.
4. Elective Hospital.

Using information provided by the HSE, trip rates were developed using the Trip Rate Information Computer System (TRICS) and census data. The following outlines the traffic growth assumed for the four future developments considered in this assessment;

1. Surgical Hub

The traffic estimate for the proposed Surgical Hub development was calculated based on a first principle analysis that was carried out based on the assumption that the Surgical Hub would be operational Monday to Friday 08.00-20.00 and it was estimated that there would be approximately 80 to 100 staff (total 179 staff working in shift) on site at any one time, and the assumption that there would be up to 50 patients attending the facility at any one time (three daily surgical sessions). It was expected that the staff and patients would arrive at different times so the traffic would likely be more spread out. The traffic estimates in Table 2-1 make allowance for some overlap between staff and patients arriving / departing.

Table 2-1 Surgical Hub Estimated Traffic

Period	Traffic Generated	
	Arrivals	Departures
AM Peak Period	71	10
PM Peak Period	3	20

2. 60 Bed Community Nursing Unit

This section will be updated following receipt of information regarding the level of activity at this development.

Table 2-2 Community Nursing Unit Estimated Traffic

Period	Traffic Generated	
	Arrivals	Departures
AM Peak Period	TBD	TBD

PM Peak Period

TBD

TBD

3. OPD Phase 2

The traffic generated by the OPD Phase 2 based on its size using TRICS. Table 2-3 shows the estimated traffic generated in the AM and PM peak periods.

Table 2-3 OPD Phase 2 Estimated Traffic

Period	Traffic Generated	
	Arrivals	Departures
AM Peak Period	29	11
PM Peak Period	11	24

4. Elective Hospital

The future traffic generated by the proposed Elective Hospital will be generated using TRICS based on the projected staff numbers at the hospital.

Using TRICS data based on the number of staff required for a general hospital without a casualty department, the trip rates were shown in Table 2-4 were applied to the car travelling staff numbers.

Table 2-4 Elective Hospital Estimated Traffic

Period	Traffic Generated	
	Arrivals	Departures
AM Peak Period	TBD	TBD
PM Peak Period	TBD	TBD

The estimated combined new traffic generated by the main future developments at MPUH are shown in Table 2-5.

Table 2-5 Combined Future Traffic to MPUH

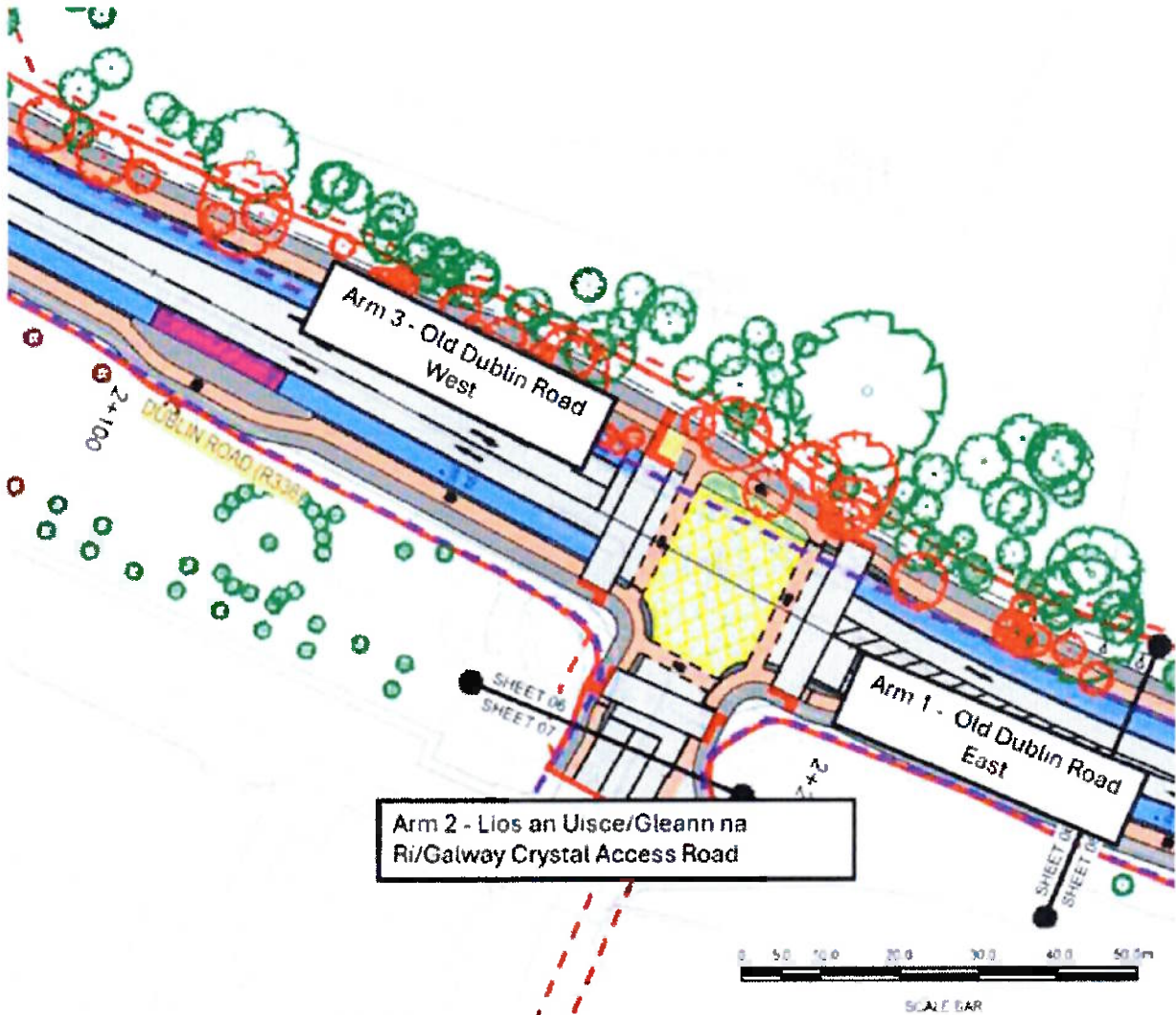
Period	Traffic Generated	
	Arrivals	Departures
AM Peak Period		
PM Peak Period		

2.1.1.2 Traffic Impact on Junction

This section of the analysis will be developed when new traffic count data is provided to show the impact of traffic, without a proposed new arm to MPUH at this location. This data is expected to be delivered in June 2025.

Figure 2-8 illustrates the junction arm naming convention used in the assessment.

Figure 2-2 Junction Arm Naming



The results of this traffic model are shown in Table 2-6.

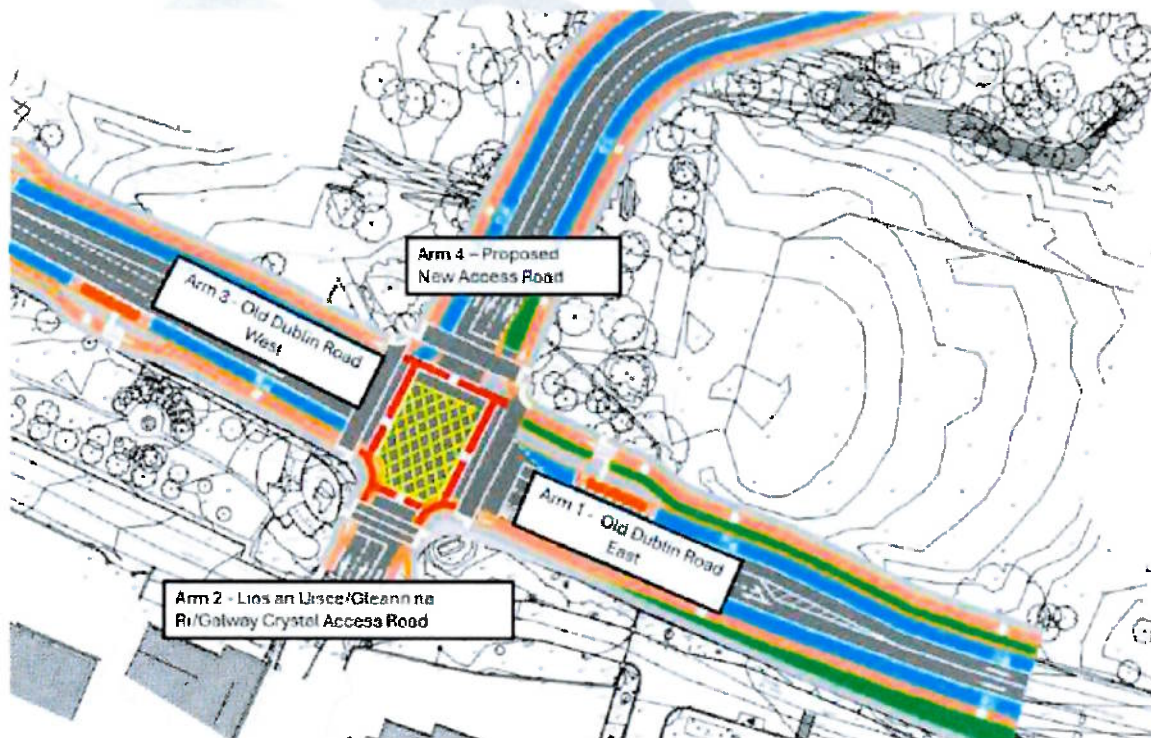
Table 2-6 Traffic Modelling Results of Junction with no New Access Road

Arm		Traffic Impact	
AM Peak Period		Flows on Arm	Degree of Saturation
Arm 1 – Old Dublin Road East			
Arm 2 - Lios an Uisce/Gleann na Rí/Galway Crystal Access Road			
Arm 3 – Old Dublin Road West			
PM Peak Period		Flows on Arm	Degree of Saturation
Arm 1 – Old Dublin Road East			
Arm 2 - Lios an Uisce/Gleann na Rí/Galway Crystal Access Road			
Arm 3 – Old Dublin Road West			

This section will be updated with the results of the LinSIG traffic model.

2.1.1.3 Traffic Impact of Proposed New Access Road

This section will be updated with the results of the LinSIG traffic model to show the impact of a new arm (Arm 4) for a proposed new access road to MPUH.

Figure 2-3 Junction Arm Naming with Proposed New Access Road

INITIAL DRAFT FEASIBILITY ASSESSMENT

The results of this traffic model are shown in Table 2-7.

Table 2-7 Traffic Modelling Results of Junction with New Access Road

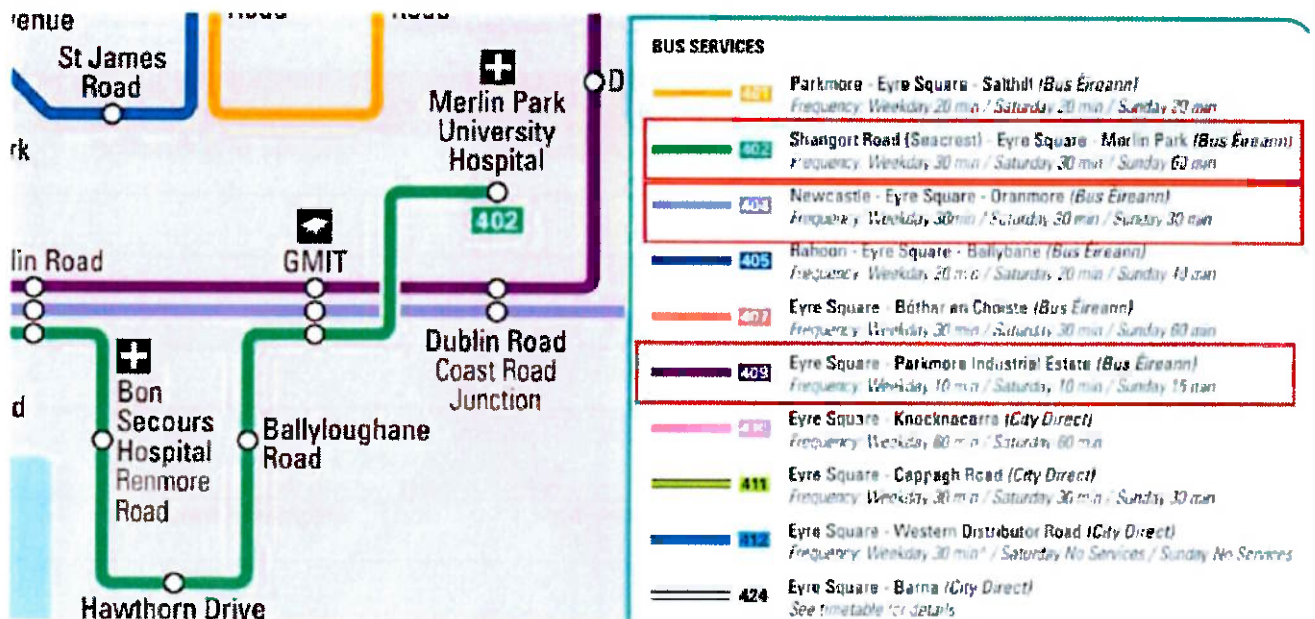
Arm		Traffic Impact	
AM Peak Period		Flows on Arm	Degree of Saturation
Arm 1 – Old Dublin Road East			
Arm 2 - Lios an Uisce/Gleann na Ri/Galway Crystal Access Road			
Arm 3 – Old Dublin Road West			
Arm 4 – Proposed New Access Road			
PM Peak Period		Flows on Arm	Degree of Saturation
Arm 1 – Old Dublin Road East			
Arm 2 - Lios an Uisce/Gleann na Ri/Galway Crystal Access Road			
Arm 3 – Old Dublin Road West			
Arm 4 – Proposed New Access Road			

This section will be updated with the results of the LinSIG traffic model.

2.1.2 Sustainable Transport Accessibility

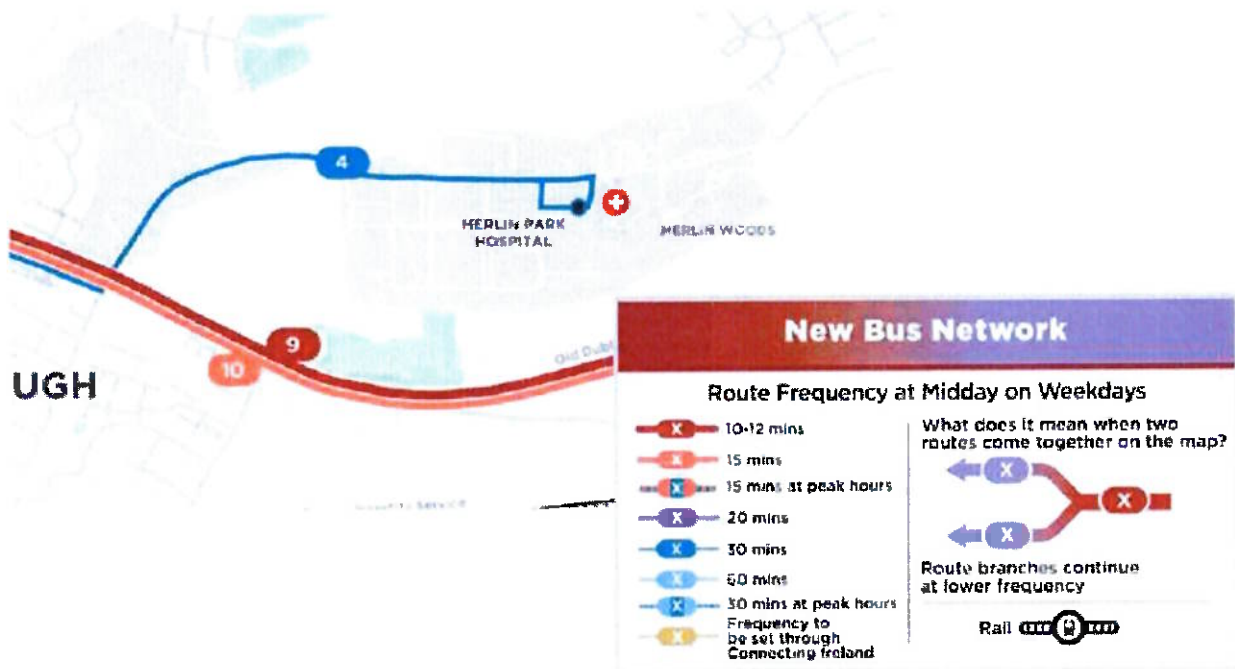
2.1.2.1 Bus Network

A proposed new access road would junction with the Old Dublin Road which is currently serviced by the 402 – Shangort Road – Eyre Square – Merlin Park service, the 404 – Newcastle – Eyre Square – Oranmore service and the 409 – Eyre Square – Parkmore Industrial Estate service. These routes and frequencies are illustrated in **Figure 2-10**.

Figure 2-4 Existing Bus Services and Frequencies

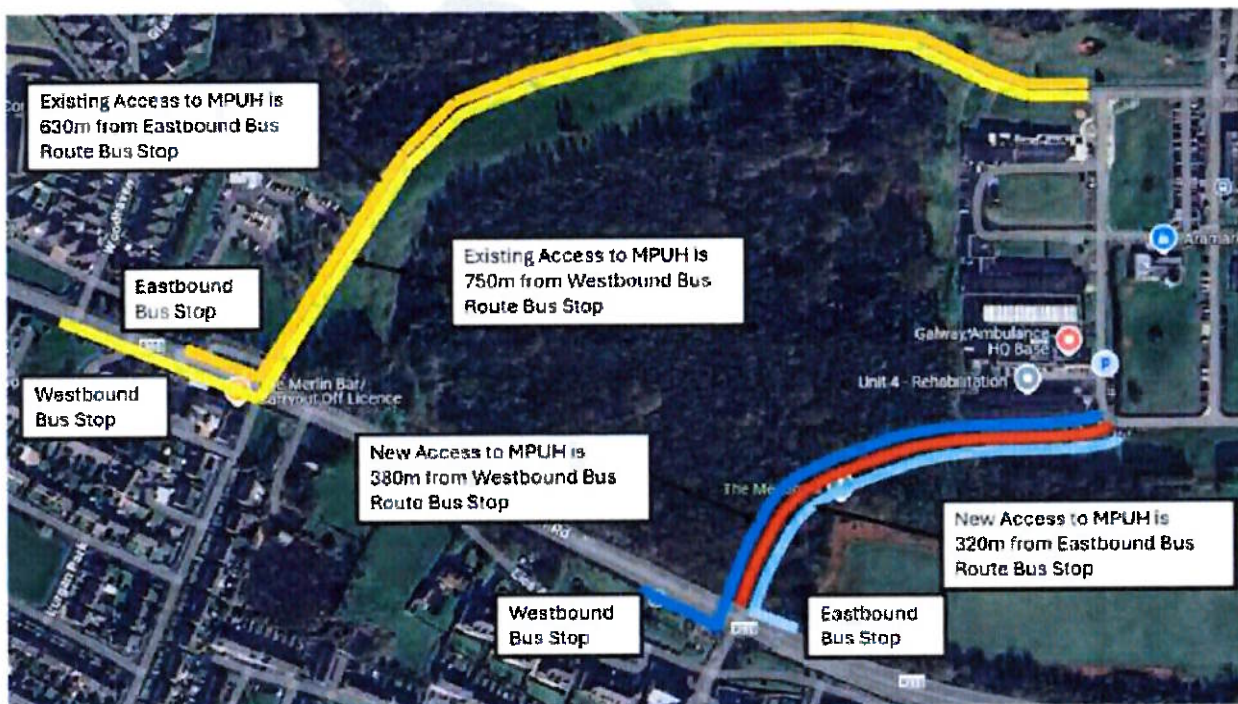
There are changes proposed to the bus routes and frequencies throughout Galway City as part of BusConnects proposals. At MPUH, these changes will include an increase frequency of service along the Old Dublin Road that will improve accessibility to MPUH by sustainable transport modes. Along the Old Dublin Road, MPUH can be accessed by bus using two high frequency routes every 15 minutes. The BusConnects proposed services are shown in **Figure 2-11**.

Figure 2-5 BusConnects Proposals at Merlin Park University Hospital



The construction of a proposed new access road is likely to have a positive impact on attractiveness of bus transport to MPUH. A proposed new access road could approximately half the length of time it will take a commuter to access a bus stop from the MPUH grounds as demonstrated in Figure 2-12.

Figure 2-6 Location of Bus Stops on Old Dublin Road



A proposed new access road could approximately half the walking time from existing bus stops serviced by high frequency services (**Figure 2-11**) which are currently 9minutes from the eastbound bus stop and 11minutes from the westbound bus stop. These walking times would reduce to approximately 5minutes from the eastbound bus stop and 6minutes from the westbound bus stop. Considering this positive impact, a proposed new access road is considered to be technically feasible with regards to the promotion of sustainable transport modes.

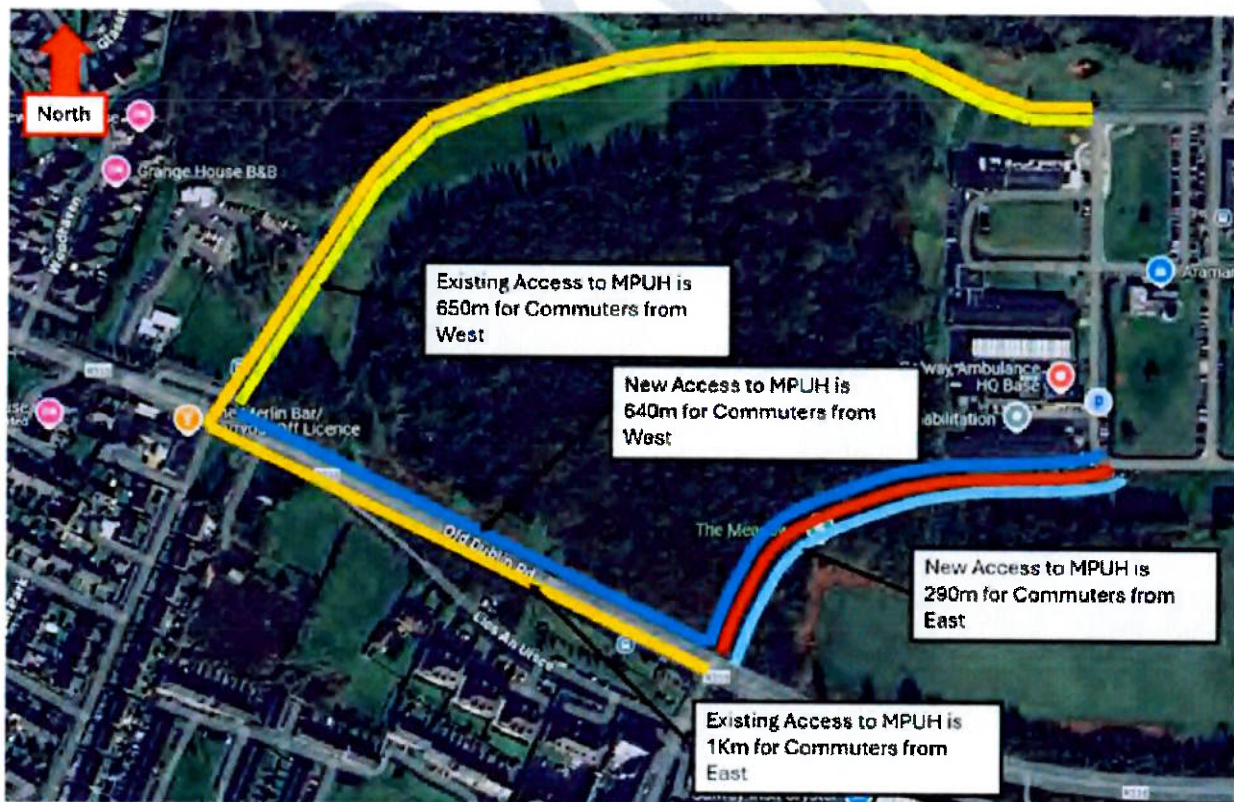
2.1.2.2 Walking and Cycling

A proposed new access road would consist of minimum of 2m footpaths and 2m segregated cycle tracks on both sides. The existing access road has a footpath on one side of approximately 1.5m width and no dedicated cycle facilities. The proposed new footpaths and cycle infrastructure would tie into the proposals for same on the BusConnects proposals. This will link the communities along the Old Dublin Road to MPUH with segregated footpath and cycle facilities. The BusConnects proposals along the Old Dublin Road are also proposed to tie in with the BusConnects Cross City Link project which includes upgrades to footpaths and cycle facilities from the Old Dublin Road to the National University of Ireland Galway (NUIG) campus via Eyre Square (Galway City Centre).

The existing access road is approximately 650m from its junction with the Old Dublin Road to the MPUH internal road network. A proposed new access road from the Dublin Road/Galway Crystal junction would be approximately 290m in length. A proposed new access road at this location would provide a more direct route for commuters from the east of its junction with the Old Dublin Road, reducing the length of this trip by approximately 710m. For commuters accessing MPUH from the west, a proposed new access road at this location could reduce journey length by approximately 10m.

Figure 2-13 illustrates the predicted reduction in walking and cycling distance from the Old Dublin Road to MPUH.

Figure 2-7 Walking and Cycling Distances from Old Dublin Road to MPUH



Considering the reduction in travel distance for active modes of transport following the construction of a proposed new entrance and access road, a proposed new entrance and access road is considered to be

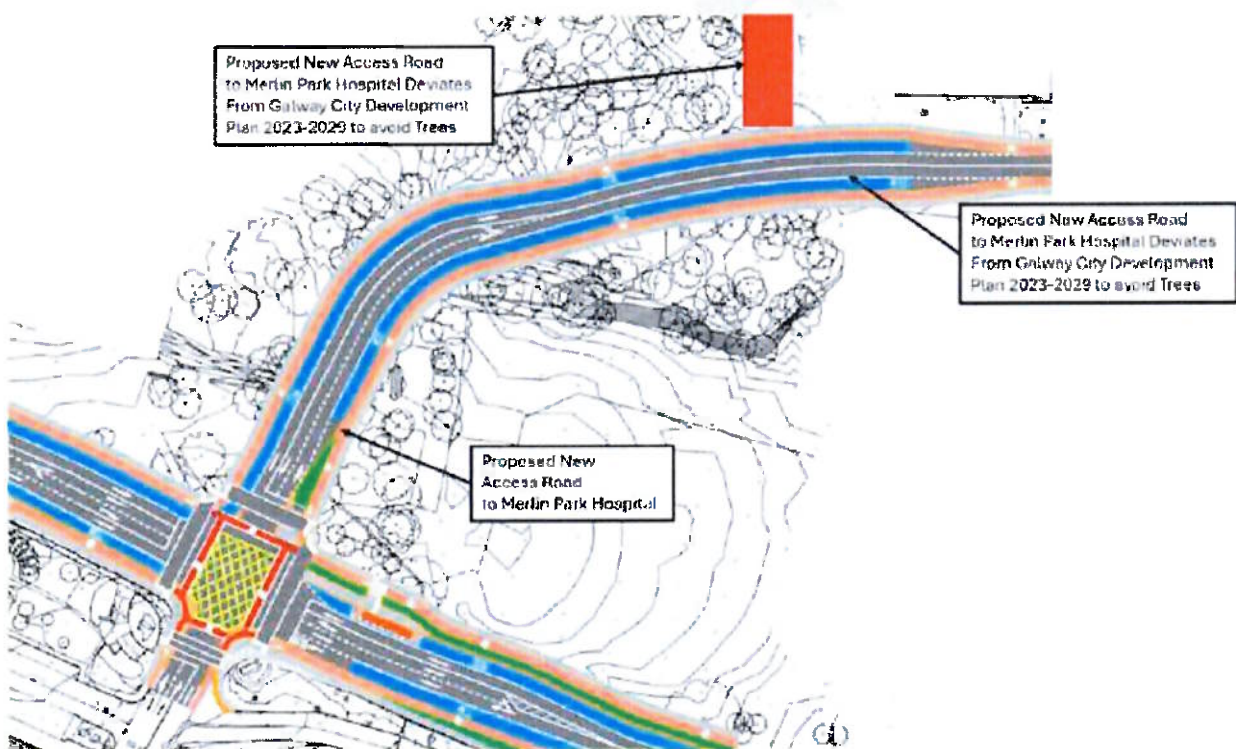
positive in terms of promoting sustainable transport modes and is therefore considered to be technically feasible to construct.

2.1.3 Buildability within Topographical Constraints

A topographical survey was undertaken at the location of the proposed new access road and surrounding area as shown in Figure 3-1. Using this topographical survey a preliminary design of a potential layout of the proposed access road was undertaken to assess the technical feasibility of constructing a proposed new access road. **Figure 2-2** illustrates the initial draft layout used to inform this assessment.

Through the progression of the preliminary design a deviation from that shown in the Galway City Development Plan 2023-2029 was considered to be more appropriate in order to minimise the impact on the trees along the western boundary of the MPUH and the lack of need for additional parallel spine roads. The total length of the proposed access road is approximately 290m from its junction with the Old Dublin Road to its junction with the existing internal access road within Merlin Park at the western extents.

Figure 2-8 Preliminary Design of Proposed Access Road



INITIAL DRAFT FEASIBILITY ASSESSMENT

There is notable thick vegetation and trees within the area of the proposed new access road that would require removal, should an alternative route emerge through further analysis. Initial options of the alternative have been identified on the adjacent MPUH road network. The feasibility of removing this vegetation to facilitate the construction of this road is also considered in the Ecological Constraints Report which forms part of the Merlin Park New Entrance Road Feasibility Report.

There are historic walls, and an embankment present within the area of thick vegetation. The assessment of the impact of the proposed new access road on these features is assessed in the Cultural Heritage Impact Assessment which forms part of the Merlin Park New Entrance Road Feasibility Report.

The topographical survey recorded a level of 19.5mAOD at the proposed Dublin Road/Galway Crystal junction location. A level of 24m AOD was recorded at the proposed tie in point with the existing MPUH internal access road at the western extents. Intermediate levels recorded show that the existing ground levels along the proposed new access road fall gradually with no major topographical impediments noted. Over the proposed new access roads 290m length a gradient of 2% was noted along the existing ground rising from the Old Dublin Road to the MPUH.

This indicates that a proposed new access road could be constructed without major earthworks or export/import of fill required.

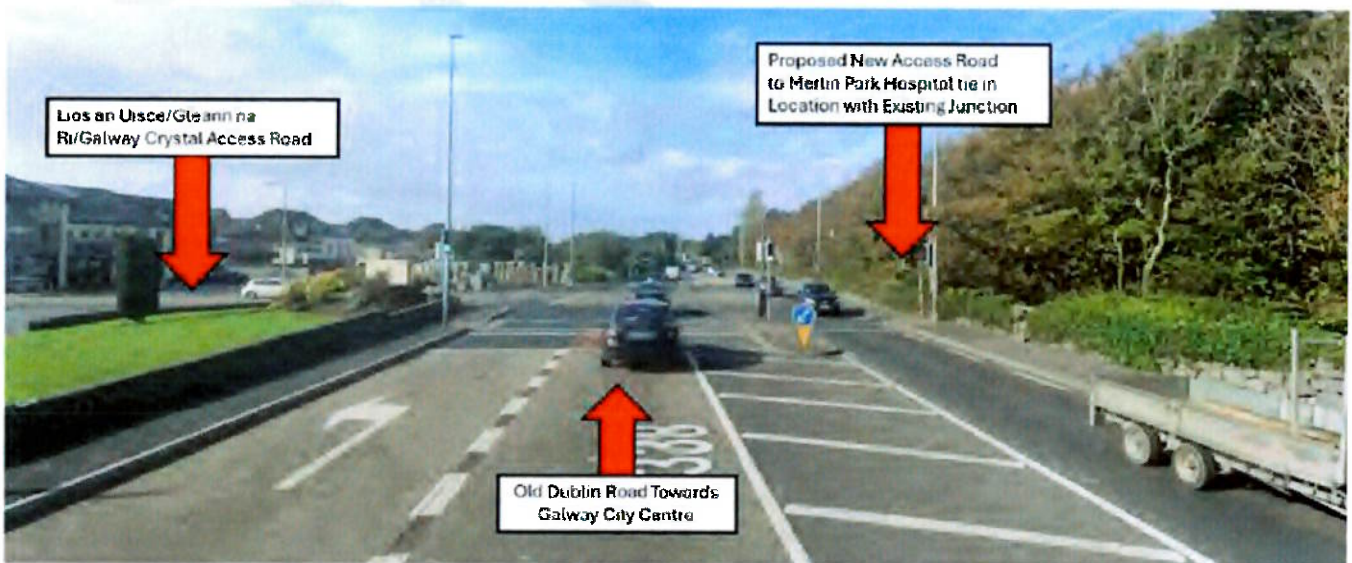
It is considered that the buildability of a proposed new access road within the existing topographical constraints is technically feasible as the allowable maximum design gradients set out in the Design Manual for Urban Roads and Streets (DMURS) can be achieved without the need for major earthworks.

2.1.4 Buildability with Consideration of Impact on Infrastructure.

2.1.4.1 Adjacent Road Network

A proposed new access road would junction the Old Dublin Road along its northern boundary. The new access road would form a new junction arm at the existing signalised junction of the Old Dublin Road and Lios an Uisce/Gleann na Rí/Galway Crystal access road. **Figure 2-3** illustrates the location where a proposed new entrance and access road to MPUH could junction with the existing Dublin Road infrastructure.

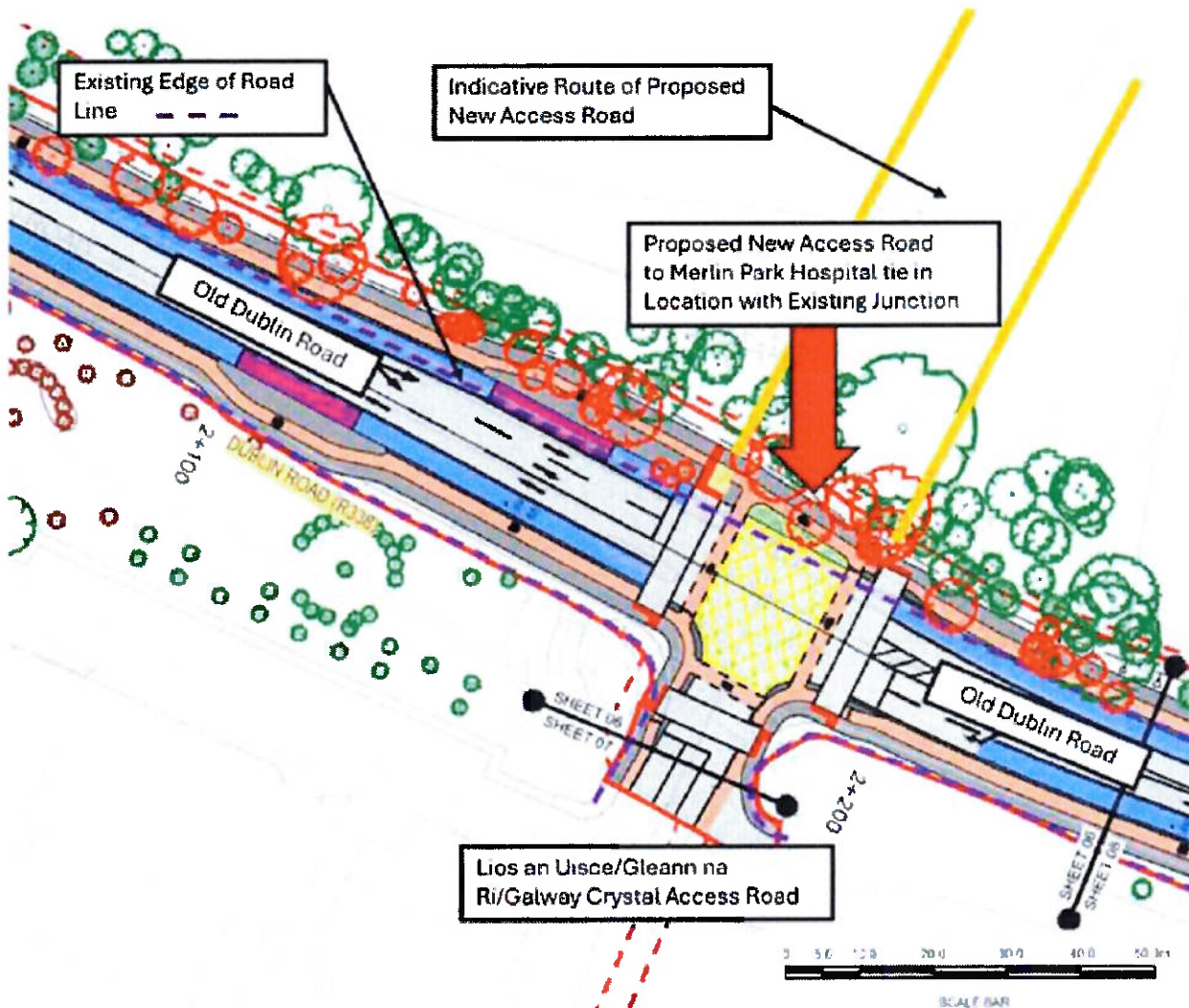
Figure 2-9 Location of New Access Road Relative to Existing Road Network



There are currently plans for upgrades to the existing junction layout as part of the BusConnects plans submitted to An Bord Pleanála 14th February 2025. These plans will require alterations to the junction that

will widen the footprint of the paved area to include dedicated bus and active travel facilities. These plans are illustrated in Figure 2-4.

Figure 2-10 BusConnects Revised Junction Layout



A proposed new access road would be beyond the line of the existing road edge in the area to the north where new paved area is required to be constructed. This means that the construction of a new access road in this location would not interfere with the existing road in its current form if BusConnects proposals proceed as planned.

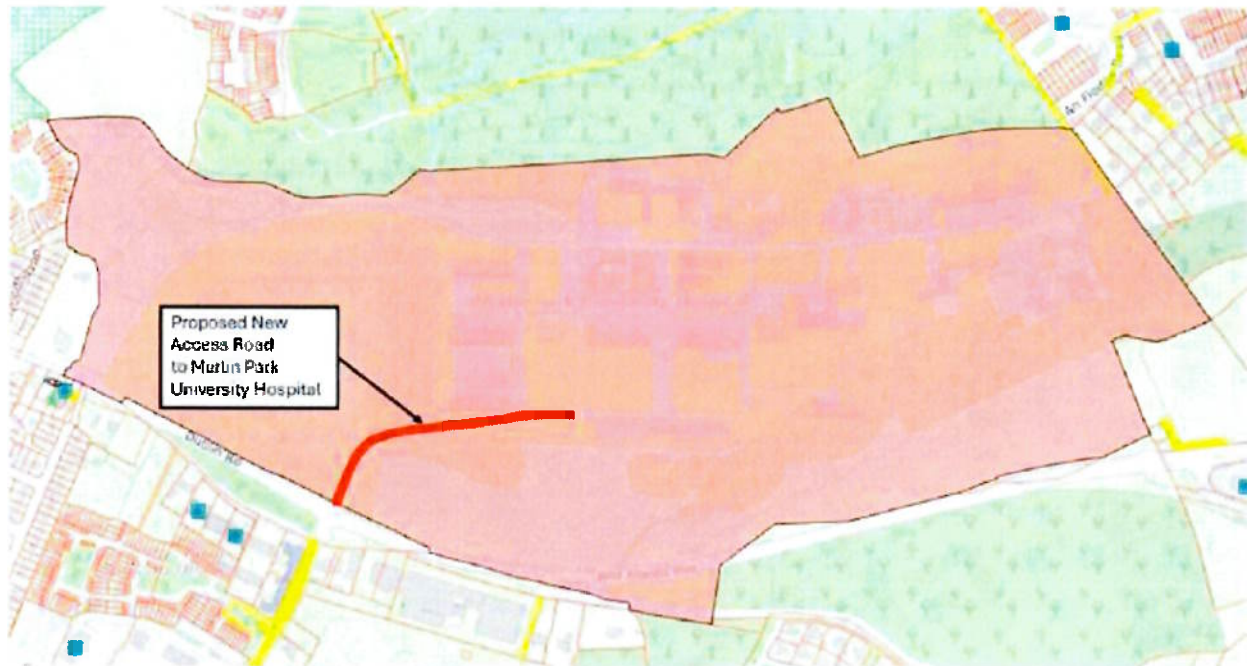
Should the BusConnects proposals proceed, the technical feasibility of constructing the new access road to the MPUH is considered to have a significant impact on the currently proposed BusConnects scheme. The proposed access road to MPUH could also be undertaken in advance of the BusConnects proposals. This would have minimal additional impact on the surrounding road infrastructure. In any case, coordination of the design and ideally the delivery of the junction, would provide the most optimum layout for both schemes.

2.1.4.2 Sewer Network

Sewer surveys were carried out to assess the potential impact of a proposed new access road on the existing sewer network. There is an existing storm sewer network on the Old Dublin Road and an existing storm sewer network within MPUH with attenuation systems. A proposed new access road would be within a greenfield site and would therefore increase the surface water runoff post construction. There are lands

adjacent to the proposed new access road within HSE ownership. These are illustrated in **Figure 2-5**. These lands could be utilised to create nature-based SuDS solutions to reduce the surface water run-off rate back to greenfield rates. This type of approach would minimise the impact on the existing sewer infrastructure and is considered to be technically feasible at this stage due to the location of the proposed access road relative to greenfield sites in HSE ownership. Considering this, the construction of a proposed new access road is considered feasible.

Figure 2-11 Adjacent Greenfield Site in HSE Ownership



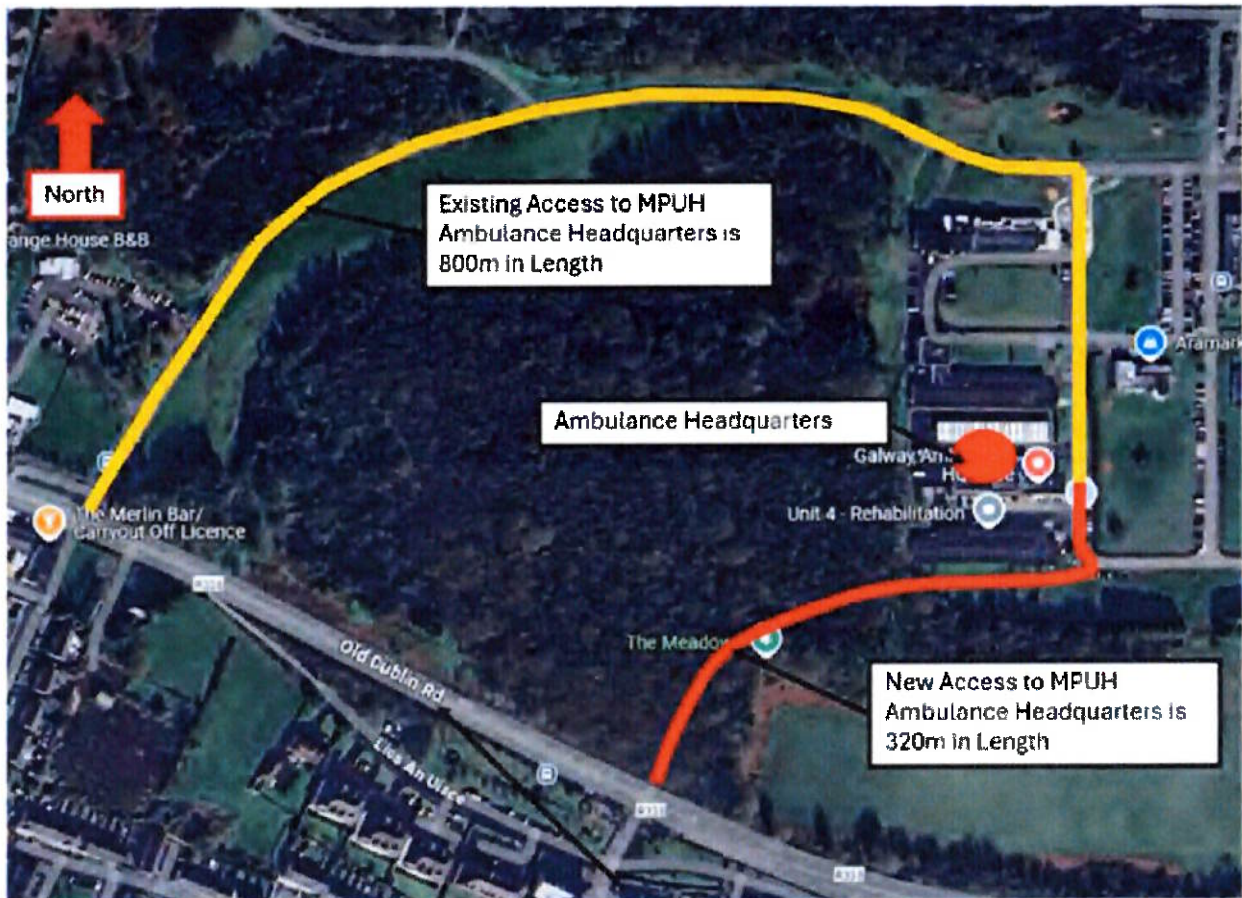
2.1.4.3 Hospital Operation

The impact on the operation of the hospital and the impact on its existing infrastructure has been considered. A proposed new access road is within a greenfield area with no existing hospital infrastructure within its footprint. A proposed new access road would tie into the existing hospital road network to the south of the MPUH site and can be constructed without adverse impact on existing buildings or internal road network circulation. The proposed new access road is also located away from the existing entrance to MPUH from the Old Dublin Road and will therefore not have an adverse impact on the access and egress of emergency vehicles during construction.

The proposed new access road location, in conjunction with the new BusConnects scheme, is likely to assist better ambulance response times. The Galway ambulance headquarters within MPUH is currently 800m from the Old Dublin Road. The proposed new access road will be approximately 320m from the Old Dublin Road. This is approximately 0.5km difference in length and will assist response times. The addition of a bus lane on the proposed new access road should be considered to further improve ambulance and bus reliability to the junction of the Old Dublin Road.

Figure 2-6 illustrates the location of the proposed new access road relative to the ambulance headquarters in MPUH.

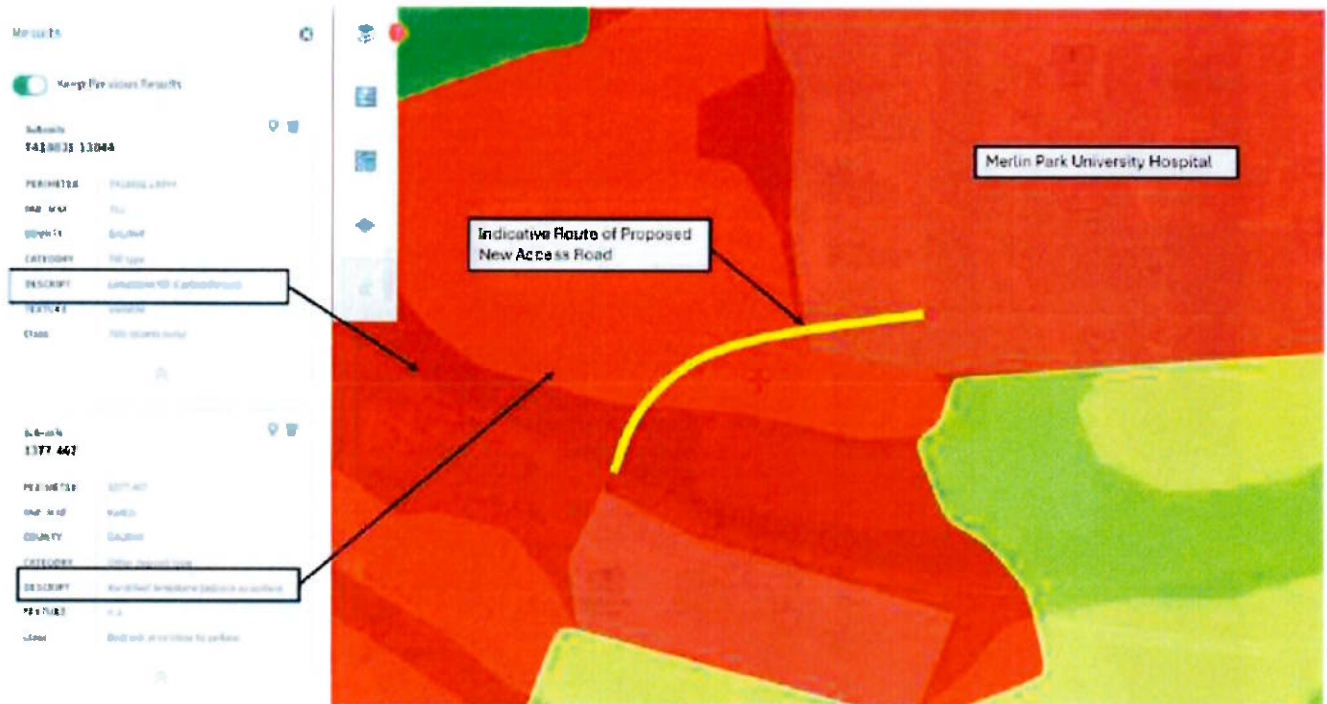
Figure 2-12 Location of Ambulance Headquarters



2.1.5 Buildability with Consideration of Ground Conditions

There have been no intrusive ground investigations carried out in the area where the proposed new access road will be constructed. Information has been obtained from EPA maps of sub soil types in this area. These sub soil types are classed as Karstified Limestone Bedrock as Surface and Limestone Till (Carboniferous). **Figure 2-7** illustrates the location of these soil types. There will likely be need for the breaking out of hard material during construction. This is not considered to be a significant constraint and therefore construction of the proposed new access road in this location is considered to be technically feasibility. Intrusive ground investigations will be required to be undertaken prior to the detailed design stage to fully ascertain the impact of the ground conditions on the construction of this proposed access road.

Figure 2-13 EPA Land and Soil Maps Extract



2.1.6 Impact on Utilities

The impact of the proposed new access road on utilities has been assessed as part of the initial draft Feasibility Study of the Mechanical and Electrical (M&E) Services. There are no known potential impacts with utilities as a result of the construction of the proposed new access road and therefore it is considered technically feasible to construct around the existing utilities infrastructure.

3 CONCLUSION

This initial assessment concludes the following;

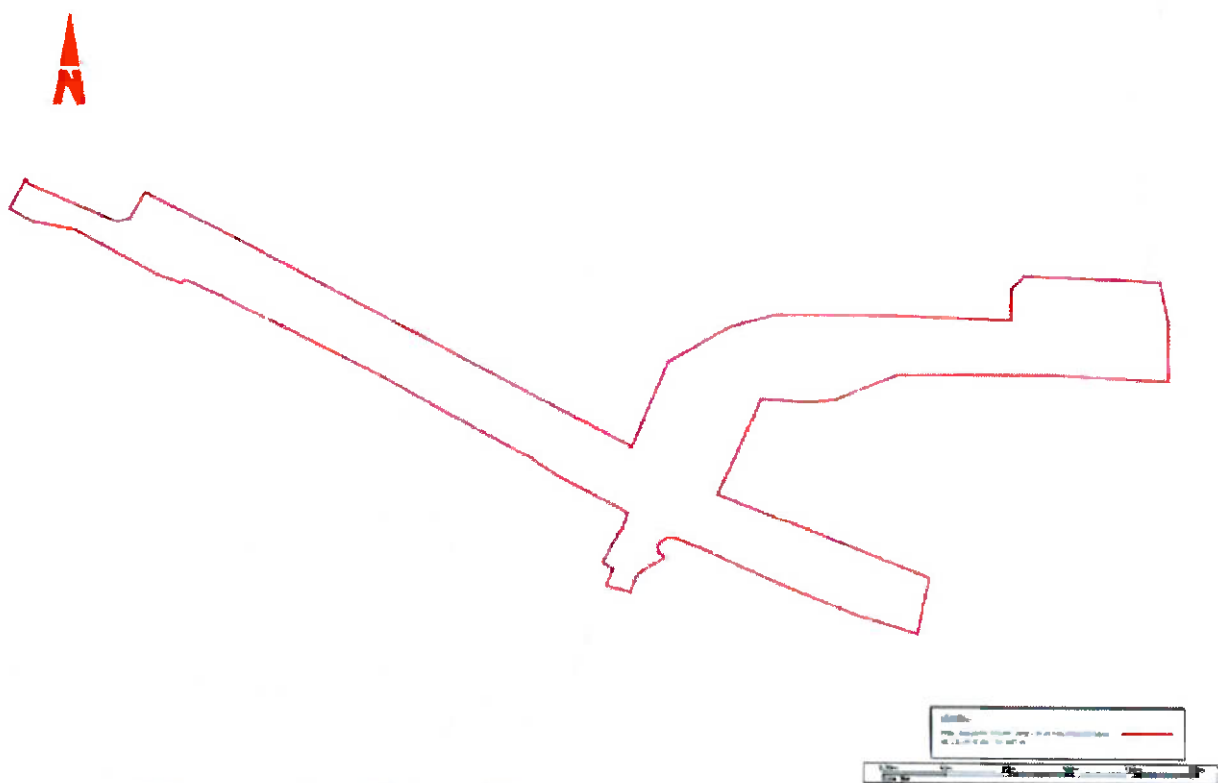
1. **Traffic Impact:** This assessment will be informed upon receipt of LA/TII traffic count data on the Old Dublin Road, in addition to HSE traffic count surveys due to be carried out in Q2 and Q3 2025. Further information will also be included that determines the future traffic generated by planned developments and service expansion at the MPUH campus.

2. **Sustainable transport accessibility**

With a proposed new road for MPUH at the old Dublin Road/Galway Crystal junction.

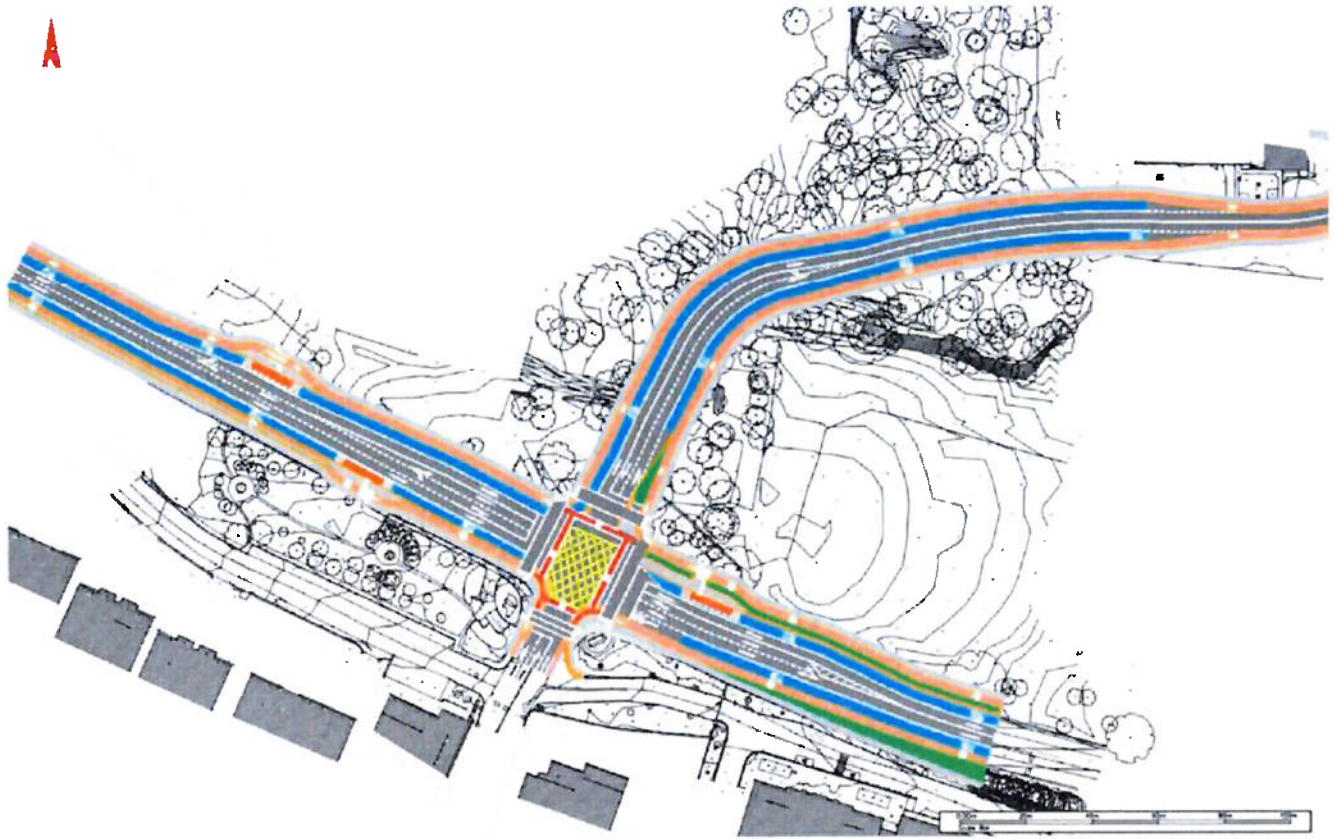
- The proposed location will reduce the walking times and distances from MPUH to high frequency bus services planned under the BusConnects project.
 - The proposed location will include new segregated, bus, walking and cycling facilities which would tie into a network of the same infrastructure along the Old Dublin Road proposed under the BusConnects project. It will also connect to the BusConnects Cross City Link proposals. A new access road should reduce journey times and distances from the Old Dublin Road to MPUH that will make walking and cycling a more attractive mode of transport.
3. **Buildability with consideration of topography:** Using topographical survey data, the construction of the proposed new access road to current gradient standards is considered to be technically feasible.
 4. **Buildability with consideration of impact on surrounding infrastructure:**
 - The assessment of the proposed new access road's impact on the existing road network and planned upgrades to this network as part of BusConnects proposal, is satisfied that the construction of this new access road is technically feasible without negative impact on existing and proposed BusConnects infrastructure.
 - Consideration was also given to the impact of the proposed new access road on the existing sewer network. Opportunities have been identified for the creation of nature-based SuDS that could reduce the effects of the surface water runoff from the proposed new paved area. The proposed new access road is considered to be technically feasible without major impact on the sewer infrastructure.
 - A proposed new access road can be constructed with minimal impact on the existing hospital infrastructure and operation.
 5. **Buildability with consideration of ground conditions:** a map based assessment was carried out to gain an understanding of the existing ground conditions in the area proposed for the construction of the proposed new access road. The construction of the new access road is considered to be technically feasible within the ground conditions. A detailed site investigation will be required prior to the design of the proposed access road to ascertain the requirement for the construction.
 6. **Impact on utilities:** There are no requirements for major utility diversions required as a result of the construction of this proposed new access road.

Figure 4-1 Preliminary Study Area for the proposed New Entrance Location



An initial Draft layout has also been developed to assist the further development of options at the next stage. This is shown in Figure 4-2.

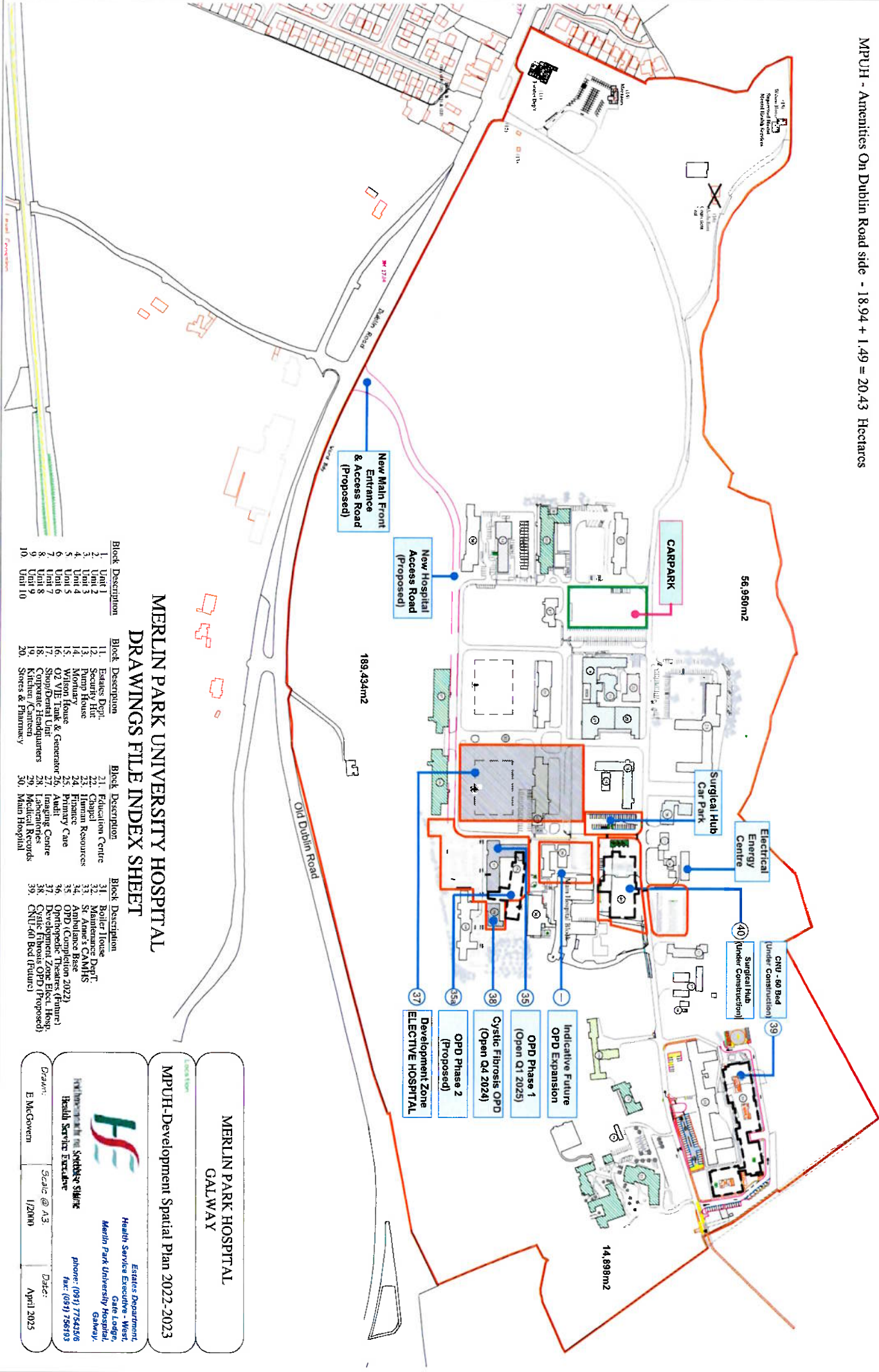
Figure 4-2 Preliminary Option for Further Development



MPUH - Total Folio Area - 57.74 Hectares

MPUH - Total Amenities - 26.12 Hectares

MPUH - Amenities On Dublin Road side - 18.94 + 1.49 = 20.43 Hectares



MERLIN PARK UNIVERSITY HOSPITAL

DRAWINGS FILE INDEX SHEET

Block Description	Block Description	Block Description
1. Unit 1	11. Estates Dept.	21. Education Centre
2. Unit 2	12. Security Unit	22. Chapel
3. Unit 3	13. Pump House	23. Human Resources
4. Unit 4	14. Mortuary	24. Finance
5. Unit 5	15. X-ray Unit	25. Primary Care
6. Unit 6	16. X-ray Unit & Generation	26. Adult
7. Unit 7	17. X-ray Unit	27. Adult
8. Unit 8	18. Corporate Headquarters	28. Laboratories
9. Unit 9	19. Kitchen/Canteen	29. Medical Records
10. Unit 10	20. Stores & Pharmacy	30. Main Hospital

MERLIN PARK HOSPITAL

GALWAY

MPUH-Development Spatial Plan 2022-2023

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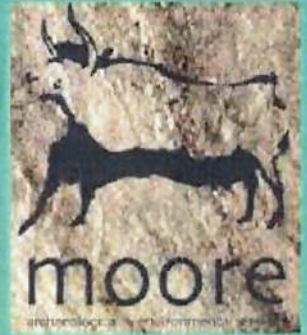
1/2000

Date:

April 2025

Prepared for
HSE West

Presented on
7th April 2025



CULTURAL HERITAGE IMPACT ASSESSMENT

Prepared by
Declan Moore

Our Reference 24200

Your Reference 24027

PROPOSED NEW ENTRANCE AND ROAD FOR MERLIN PARK HOSPITAL, GALWAY CITY

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Revision History

Revision Reference	Date Issued	Issued To
24200 Merlin Park Entrance CHA	5 th December 2024	Draft to Client
24200 Merlin Park Entrance CHA RevA	28 th March 2024	Client

Report prepared by: Declan Moore
Archaeological Consultant

Purpose

This report describes the results of a cultural heritage assessment of a proposed new entrance and road at Merlin Park Hospital, Galway. The results, conclusions and recommendations contained within this report are based on information available at the time of its preparation. Whilst every effort has been made to ensure that all relevant data has been collated, the author and Moore Group accept no responsibility for omissions and/or inconsistencies that may result from information becoming available after the reports completion. Moore Group accepts no responsibility or liability for any use that is made of this document other than by the Client for the purposes for which it was originally commissioned and prepared.

Filename: 24200 Merlin Park Entrance CHA RevA

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Abbreviations

ACA	Architectural Conservation Areas
DHLGH	Department of Housing, Local Government and Heritage
DLHG	Demesne Landscapes and Historic Gardens
NIAH	National Inventory of Architectural Heritage
NMS	National Monuments Service
NMI	National Museum of Ireland
OSI	Ordnance Survey Ireland
RMP	Record of Monuments and Places
RPS	Record of Protected Structures
SMR	Sites and Monuments Record

Coordinate System

All GPS coordinates given in this report are in Irish Transverse Mercator (ITM).

1 Introduction

Moore Group was commissioned to complete a cultural heritage impact assessment of a proposed new entrance and access road at Merlin Park Hospital, Galway City as described herein. This subject site is in agricultural grazing land, the boundaries of which are demarcated by mature trees and hedgerows.

There are two recorded monuments within 200m of the proposed development and a further site within the grounds of Merlin Park. These include Merlin Park tower house and Sheela Na Gig (GA094-023 & 023001), a 19th century House (GA094-028) which is no longer extant, an associated designed landscape (GA094-024). The proposed development is with the overall designed landscape and roughly 50 north of the centre point of GA094-024. There is no NIAH or RPS sites within the immediate vicinity of the proposed development. The nearest RPS sites are RPS – 5901 - Merlin Castle/Merlin Park Castle located 450m to the north and RPS – 5902 - Two c. 17th century gravestones, both inscribed, one dated 1650 located roughly 350m to the northeast. Archaeological testing of a proposed new car parking area was carried out by the author in 2024, which resulted in the discovery of 7 burial cuts and human remains.

The subject site lies within the demesne lands (**NIAH Site ID: 5343**) associated with Merlin Park House (no longer extant).

The demesne of Merlin Park is featured on the OS first edition 6" mapping, sheet no 094 dated 1829-1841. Merlin Park demesne was originally developed by Mr. Charles Blake in the early 19th century before being acquired by the State in 1945. The original demesne has been much altered since to accommodate the existing hospital.

It should be noted that the proposed Galway City Bus Connects Scheme will involve road widening along the Dublin Road and demolition of the existing limestone boundary wall which, while of more recent construction, has a heritage value as it was constructed from stone which comprised the original demesne wall. The treatment at this location is a replacement on a like for like basis along the new land take line.

1.1 Scope of Work

This study aims to assess, as far as reasonably possible from existing records, the archaeological and cultural heritage environment (hereafter referred to as cultural heritage environment or cultural heritage resource), to evaluate the potential or likely impacts that the proposed development will have on this environment and, where appropriate, to suggest mitigation measures to ameliorate potential impacts, in accordance with the policies of:

- Department of Housing, Local Government and Heritage.
- The National Monuments Acts (1930-2005).
- Galway City Development Plan (2023 - 2029).
- Best practice guidelines.

Following on from this, the residual impact that the proposed scheme will have on the baseline environment is identified and evaluated.

1.2 Terms and Definitions

Cultural Heritage

The phrase 'cultural heritage' is a generic term used to identify a multitude of cultural, archaeological, and architectural sites and monuments. The term 'cultural heritage', in Environmental Impact Statement compliance with Section 2(1) of the Heritage Act (1995), is used throughout this report in relation to archaeological objects, features, monuments and landscapes as well as all structures and buildings which are considered to have historical, archaeological, artistic, engineering, scientific, social, or technical significance/merit. For the purposes of this report the definition of "cultural heritage" is taken broadly from the UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage, 1972, which considers the following to be "cultural heritage":

- Tangible cultural heritage.
- movable cultural heritage (artefacts).
- immovable cultural heritage (monuments, archaeological sites, etc).
- underwater cultural heritage (shipwrecks, underwater ruins, and cities); and
- Intangible cultural heritage (oral traditions, folklore etc).

Cultural heritage comprises archaeology, architectural heritage, folklore, and history. Archaeology is the study of past societies through surviving structures, artefacts, and environmental data, and is concerned with known archaeological sites and monuments, areas of archaeological potential and underwater archaeology. Architectural heritage comprises structures, buildings, traditional and designed, and groups of buildings including streetscapes and urban vistas, which are of historical, archaeological, artistic, engineering, scientific, social, or technical interest, together with their setting, attendant grounds, fixtures, fittings, and contents. Architectural heritage and archaeology together form 'built heritage' or 'tangible heritage'. Folklore and history are aspects of 'intangible heritage', which also includes language, musical traditions, traditional crafts and skills, townland names, poetry and so on. These forms of cultural heritage

are “non-moveable, non-material and largely non environmental although by their associations with certain sites and places, add to the character of an area”.

World Heritage Sites

Although not formally recognised in Irish legislation, impacts on World Heritage Sites will nonetheless be a material consideration for developments in their wider vicinity. To be included on the World Heritage List, sites must be of outstanding universal value and meet at least one out of ten selection criteria. A World Heritage Site is a landmark or area with legal protection by an international convention administered by the United Nations Educational, Scientific and Cultural Organization (UNESCO). World Heritage Sites are designated by UNESCO for having cultural, historical, scientific, or other form of significance. The sites are judged to contain "cultural and natural heritage around the world considered to be of outstanding value to humanity".

National Monuments

On a national level, the highest degree of protection granted to archaeological monuments are those afforded National Monument status, which are protected under the National Monuments Act of 1930 and its various amendments. These are the pre-eminent archaeological sites in Ireland and fall into several categories including:

- Sites that are in the ownership or guardianship of the state.
- Monuments that are the subject of Preservation Orders.
- Monuments in the ownership of a local authority; and
- Walled towns.

Generally National Monuments in state care are numbered amongst the best preserved and most impressive monuments in the country.

Record of Monuments and Places/Archaeological Survey Database

The legislation that affords protection to the archaeology of Ireland has seen several amendments since the first National Monuments Act of 1930 and there is a legacy of several different registers and associated terminology.

A feature recorded in the 'Record of Monuments and Places' (RMP) refers to a recorded archaeological site that is granted statutory protection under the National Monuments Act 1930-2004. The RMP is the most widely applying provision of the National Monuments Acts. It comprises a list of recorded monuments and places (resulting from the Archaeological Survey of Ireland [ASI]) and accompanying maps on which such monuments and places are shown for each county. The information contained within the RMP is derived from the earlier non-statutory Sites and Monuments Record (SMR). However, some entries were not transferred to the statutory record as they refer to features that on inspection by the Archaeological Survey were found not to merit inclusion in that record or could not be located with sufficient accuracy to be included. Such sites however remain part of the SMR. The record is a dynamic one and is updated to take account of on-going research.

The most up-to-date record of archaeological monuments, the Archaeological Survey Database (ASD), is available for viewing and download on the www.archaeology.ie website. This record is continually revised and indicates several additional sites that do not feature in the RMP. The National Monuments Service also makes available SMR Zones of Notification on the website.

Sites and Monuments Record

The Sites and Monuments Record (SMR) is an inventory of the known archaeological monuments in the State. There are more than 150,800 records in the database and over 138,800 of these relate to archaeological monuments.

An 'area of archaeological potential' refers to an area of ground that is deemed to constitute one where archaeological sites, features or objects may be present in consequence of location, association with identified/recorded archaeological sites and/or identifiable characteristics.

Register of Historic Monuments

Section 5 of the 1987 National Monuments Act states that the Minister is required to establish and maintain a Register of Historic Monuments. Historic monuments and archaeological areas present on the register are afforded statutory protection under the 1987 Act. Any interference with sites recorded in the Register without the permission of the Minister is illegal, and two months' notice in writing is required prior to any work being undertaken on or in the vicinity of a registered monument. This list was largely replaced by the Record of Monuments and Places following the 1994 Amendment Act.

Architectural Conservation Areas

The Planning and Development Act 2000, as amended, provides that all Development Plans must now include objectives for preserving the character of Architectural Conservation Areas (ACAs). An ACA is a place, area, group of structures or townscape of special architectural, historical, archaeological, artistic, cultural, scientific, social, or technical interest, or which contribute to the appreciation of protected structures.

In these areas, the protection of the architectural heritage is best achieved by controlling and guiding change on a wider scale than the individual structure, to retain the overall architectural or historic character of an area.

Record of Protected Structures/National Inventory of Architectural Heritage

The importance of our built heritage is enshrined in the Planning and Development Act, 2000 (Part II, Section 10) which places a statutory obligation on local authorities to include in their Development Plans objectives for the protection of structures, or parts of structures, which are of special interest. The principal mechanism for the protection of these structures is through their inclusion on the Record of Protected Structures (RPS). This list provides recognition of the importance of a structure, protection from adverse impacts and potential access to grant aid for conservation works. The record of Protected Structures is an ongoing process and can be reviewed and added to. In considering additions to the Record of

Protected Structures local authorities have recourse to the National Inventory of Architectural Heritage (NIAH) which provides a source of guidance on the significance of buildings in their respective areas.

Designed Landscapes-Demesnes, Historic Gardens & Country Estates

The Architectural Section of the DHLGH is in the process of a multi-phase study looking at Designed Landscapes and Historic Gardens that appear as shaded areas on the First Edition Ordnance Survey Maps, circa. 1830.

'The objective of this survey is to begin a process of understanding of the extent of Ireland's historic gardens and designed landscape. Sites were identified using the 1st edition Ordnance Survey maps. These were compared with current aerial photography to assess the level of survival and change.'

1.3 Methodology

1.3.1 Introduction

In this assessment, tangible cultural heritage resources are captured under the relevant sections of archaeology and architectural/built heritage., while non-tangible associations with these sites and the wider study area (i.e., history and folklore) are assessed, where known, in the archaeological and historical background section of this report, with further information presented in relevant sections.

Evaluation of the potential impacts of the proposed development upon the archaeological, architectural, and cultural heritage resource is based on a desktop study of written, graphic, photographic, cartographic, and electronic information sources followed by a field survey. Considering, amongst other aspects, the legislative protection afforded to the cultural heritage resource, this report evaluates the archaeological, architectural, cultural, and historical importance of the subject area and examines the potential impacts of the proposed development and the effects on that resource.

The methodology used in the preparation of this assessment is broadly based on guidance provided in the Guidelines for Cultural Heritage Impact Assessment of TII National Road and Greenway Projects (TII Publication Number PE-ARC-02009), the EPA's Guidelines on the information to be contained in Environmental Impact Assessment Reports (EPA 2023) and other relevant guidelines.

This impact assessment addresses Cultural Heritage under the two headings of archaeology and architectural/built heritage.

1.3.2 Desktop Assessment

Known cultural heritage sites were reviewed on the Archaeological Survey of Ireland (ASI) along with aerial photography and Ordnance Survey Ireland (OSI) mapping and other relevant sources. The following information sources, where relevant, were used for this report:

Archaeological Heritage

- UNESCO World Heritage Sites including the tentative list of candidate sites.
- National Monuments, be they in the ownership or guardianship of the State, in the ownership of a local authority or monuments under preservation orders.
- Potential National Monuments in the ownership of a local authority.
- Walled Towns.
- Archaeological Monuments that are the subject of both Preservation Orders and Temporary Preservation Orders.
- The Register of Historic Monuments.
- Archaeological Survey Database (ASD) from www.archaeology.ie (Sites and Monuments Record available through the Historic Environment Viewer).
- Record of Monuments & Places (RMP) for Galway City.
- National Monuments Service (NMS) Sites and Monuments Record (SMR) Zones of Notification.

Architectural Heritage

- Architectural Conservation Areas from the Galway City Development Plan (2023 - 2029).
- Protected Structures from the Galway City Development Plan (2023 - 2029).
- National Inventory of Architectural Heritage (NIAH) and NIAH Garden Survey.
- Demesnes Landscapes and Historic Gardens indicated on the OSI First Edition Mapping.

Where appropriate, sites considered of exceptional value or sensitivity in the broader area were also reviewed.

The Galway City Development Plan (2023 - 2029) was reviewed to obtain a comprehensive understanding of the cultural heritage of the area. The development plans contain lists of cultural heritage sites including national monuments, recorded monuments, architectural conservation areas, protected structures, and protected views as well as baseline assessments of the landscape character of the county.

The plans also outline the county's heritage policies and objectives that aim to protect and promote the archaeological, architectural, and cultural heritage resource. This evaluation was carried out with due regard to these policies and other relevant information contained within the plans.

To assess the potential impact of the proposed works the following sources were also consulted or reviewed:

- Excavations Bulletin. The Excavation Bulletin is both a published directory and an online database (www.excavations.ie) that provides summary accounts of all the excavations carried out in Ireland and Northern Ireland from 1970 to 2012. The database gives access to over

15,000 reports and can be browsed or searched using multiple fields, including Year, County, Site Name, Site Type, Grid Reference, Licence No., Sites and Monuments Record No. and Author.

- Topographical files of the National Museum of Ireland. The topographical files of the NMI identify all recorded finds held in the NMI archive that have been donated to the state in accordance with national monuments legislation. The files sometimes include reports on excavations undertaken by NMI archaeologists in the early 20th century. Valuable information that can be gleaned might include the exact location, ground type, depth below ground level and condition when found, of each find. However, the amount and the usefulness of the information available on each find can vary considerably. The topographical files are listed by county and townland and/or street name.
- Cartographic Sources. Analysis of historic mapping shows how the landscape has changed over time. The comparison of editions of historic maps can show how some landscape features have been created, altered, or removed over a period. Sometimes features that appear on these early maps are found to be of potential archaeological significance during fieldwork.
- Toponyms. Townland names are a rich source of information for the land use, history, archaeology, and folklore of an area. The placename can have a variety of language origins such as, Irish, Viking, Anglo-Norman and English. The names can provide information on families, topographical features, and historical incidents. In terms of the built environment many names reference churches, fords, castles, raths, graveyards, roads and passes etc. In compiling the following data, several resources were consulted including the Placenames Database of Ireland www.logainm.ie and Irish Names of Places by P.W. Joyce (Joyce, 1913).
- Aerial photographs. The usefulness of aerial photography is that it allows for a different perspective - 'the distant view'. Archaeological sites may show up on the ground surface, depending on their state of preservation, by light and shadow contrasts (shadow marks), tonal differences in the soil (soil marks) or differences in height and colour of the cultivated cereal (crop marks). It is also a useful aid in pinpointing existing features and can assist in ascertaining their extent and degree of preservation.
- Lidar. The Geological Survey Ireland Open Topographic Data Viewer was consulted for available 1m/2m DTM Lidar data of the PDA¹.
- Published archaeological inventories; and
- Documentary Sources: several literary references were consulted.

Field Inspection

In addition to documentary and archival research and analysis, a detailed surface-based inspection of the area of the PDA was undertaken by the author. This also involved visiting selected accessible monuments to appraise the possible effects that the proposed development would have on the receiving

¹ <https://dcenr.maps.arcgis.com/apps/webappviewer>

archaeological, architectural, and cultural heritage environment as well as to determine sites' current extent and condition. Field inspection is necessary to determine the extent and nature of archaeological, architectural, and historical remains and can also lead to the identification of previously unrecorded or suspected sites and portable finds through topographical observation and local information.

1.4 Difficulties Encountered

No difficulties were encountered during the completion of this assessment.

1.5 Description of Project

The development will consist of a new entrance from the Dublin Road and an internal road with the Merlin Park Campus.

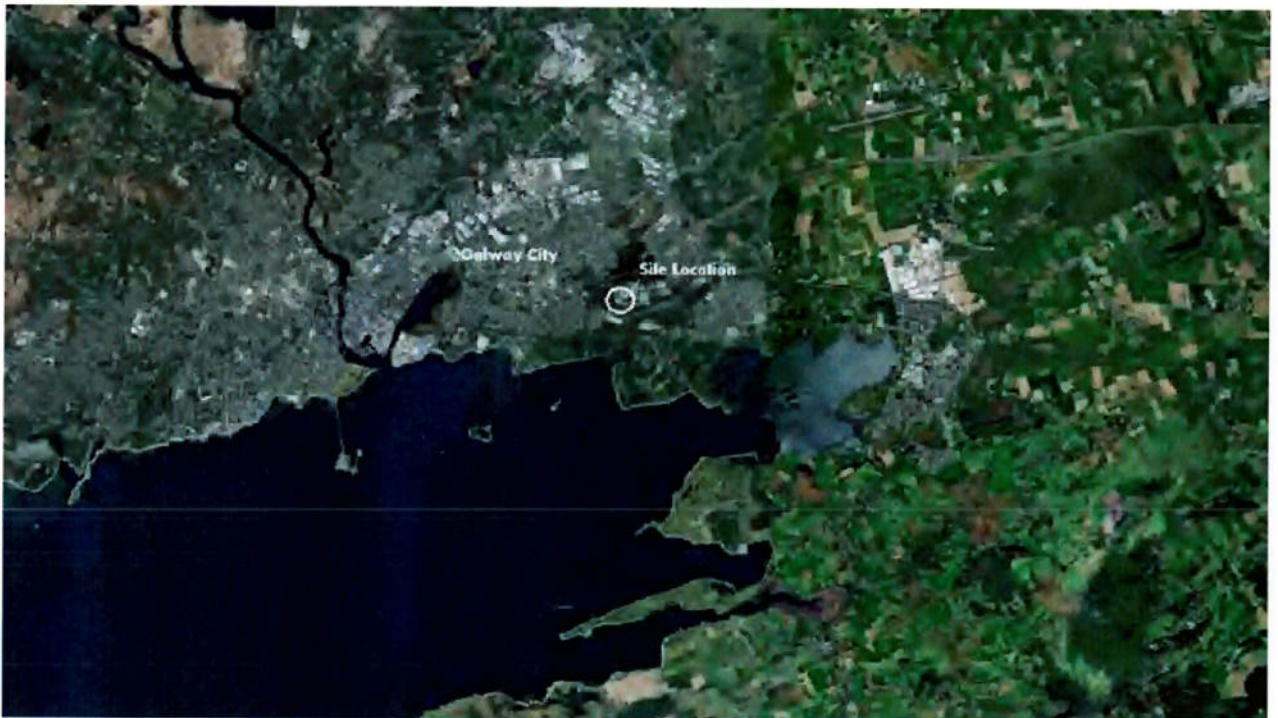


Figure 1 Site location map (extract from Discovery Map 1:50,000).

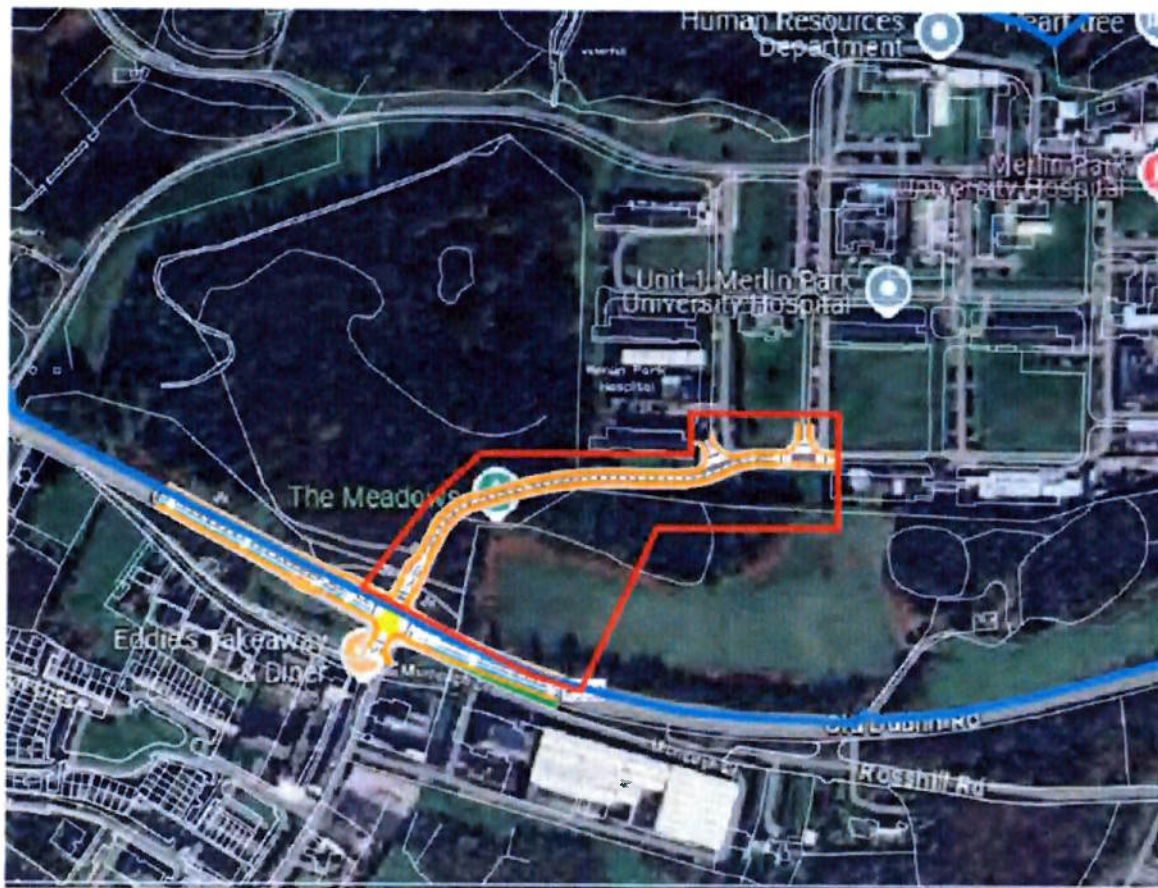


Figure 2 Study area – proposed new entrance and internal road marked in orange.

2 Existing Environment

2.1 Location Details

The proposed project is located in the townland of Merlin Park, Galway. The proposed development is located to the north of the old Dublin Road on the east side of Galway City.

Table 1 Location details

County	Galway
Townland (s)	Merlin Park
OS Sheet number (s)	GA094
Recorded Monuments	GA094-024 – Designed Landscape
NGR	Centred on 533775/725452

2.2 Archaeological and Architectural Baseline Data

2.2.1 General Archaeological and Historical Background

2.2.1.1 Archaeological Background

2.2.1.1.1 Mesolithic Period

The Mesolithic (middle stone age) people were the first inhabitants of Ireland, arriving about 9000 years ago. They were a mobile society relying on wild resources for food, which was hunted and gathered using stone tools as well as boats, nets and traps. Settlement was in temporary and semi-permanent groups of huts constructed of wood slung with hide, which may have operated as seasonal or hunting camps.

Mesolithic activity to date shows a marked concentration in the northeast of Ireland. Evidence for Mesolithic activity in Galway is scarce. The concentration of find spots and sites in the northeast can, in part be attributed to both the availability of flint and the large number of antiquarians and collectors in the region and suggests that activity in this period was widespread in the country, with settlers probably utilising the extensive coastline for fish and shellfish.

There is still a lack of known information about the Mesolithic period in area. Evidence for this period is limited to a few worked flakes found near Oughterard. However, a possible Mesolithic pebble hammer axe was found near Omey Island. A shell midden has been recorded in the sand dunes at Doonlaughan on the western coast of Connemara, however no date has been obtained for it (Robinson, 1997, 32). Finds from Galway include a distally trimmed chert flake from the western shores of Lough Corrib at Oughterard which is later Mesolithic in provenance.

“Jim Higgins and Michael Gibbons uncovered some evidence of a Late Mesolithic presence near the junction of High Street and Cross Street in Galway City. Stone artefacts of the Late Mesolithic and Early Neolithic times were found only a few miles away near Menlough graveyard, between Menlough Wood and Terryland castle, during the late 1970's” (Spellissy, 1999, 29).

2.2.1.1.2 Neolithic Period

Farming was first adopted in the Middle East but spread gradually across Europe in succeeding centuries, arriving in Ireland about 4000 BC. Tending of crops and animals required a more sedentary lifestyle and larger permanent settlements were built. The megalithic (from the Greek mega – large and lith – stone) monuments of the Neolithic people built as communal tombs or for ceremonial purposes, are relatively common in the landscape. New methods were adopted for shaping stone tools and the first long distance trade networks were established.

Neolithic activity is more apparent in the archaeological record of Galway due to the presence of a number of known megalithic monuments. Megalithic monuments can be divided into funerary monuments, communal tombs for the burial of the dead and those with a more esoteric function such as stone circles,

stone rows or single standing stones whose function was probably ceremonial. Single standing stones may have acted as foci or markers at the edges of territories.

The best-known Neolithic monuments are the megalithic tombs. There are many examples of these in the Connemara region. There are clusters found at the heads of Streamstown, Cleggan and Ballynakill bays. Portal, Court and the later Wedge tombs are found within the area. These monuments include the Connemara group of 31 tombs indicating fairly intensive settlement in the area. To date, no passage tomb has been identified in County Galway, although some of the larger hilltop monuments and Cairns may contain them (Archaeological Inventory of County Galway, 1999,1).

There are two megalithic structures recorded to the west of Galway City centre in Rahoon (GA094-055--) and in Townparks townland (GA094-088--).

2.2.2 The Bronze Age

As stone tools were replaced by the use of copper, later combined with tin to make bronze, the structure of society also changed over centuries. While some communal megalithic monuments, particularly wedge tombs continued to be used, the Bronze Age is characterised by a movement towards single burial and the production of prestige items and weapons, suggesting that society was increasingly stratified and warlike.

There is also a notable concentration of Bronze Age burials known in an area roughly bounded by Athenry, Tuam and Headford, indicating that activity in this period was widespread in the region and suggesting a significant population density. Barrows, generally dating from the Late Neolithic to the Early Iron Age, along with standing stones are quite common in the Tuam - Headford area.

Although there is some debate about the provenance of the standing stones, it is generally accepted that they date from the later part of the Bronze Age. Stone rows or single standing stones were probably ceremonial in function, although single standing stones may have acted as foci or markers at the edges of territories.

There are a number of recorded Bronze Age monuments including a stone circle (GA094-041--) located immediately to the southwest of Galway city centre in Pollnarrowma East townland and a stone group (GA082-016--) recorded in Ballybrit townland.

Fulachta Fiadh, which consist of small, horseshoe shaped grass covered mounds, are composed of burnt and fire cracked stones and a central pit or trough. They are common throughout the country, and many are identified each year. There is a Fulacht Fiadh (GA082-043--) in Doughiska townland.

2.2.2.1 The Iron Age/Early Historic Period

In late Bronze Age Ireland, the use of the metal reached a high point with the production of high-quality decorated weapons, ornament and instruments, often discovered from hoards or ritual deposits. The Iron Age however is known as a 'dark age' in Irish prehistory. Iron objects are found rarely, but there is no evidence for the warrior culture of the rest of Europe, although the distinctive La Tené style of art with

animal motifs and spirals was adopted. Life in Iron Age in Ireland seems to have been much as it was in the early historic period – mixed farmers living in or around small-defended settlements known as ringforts or stone cashels.

Ringforts, hilltop enclosures and other large enclosures are common across County Galway, both as raths (defended settlements defined by an earthen bank) and cashels (defined by a bank of stone). The smaller ringfort settlements are the most common monuments in Galway and are thought to be small farmsteads, enclosing houses, farm buildings and animal pens, enclosed as protection against raiders or wild animals. Excavations of the interiors suggest that the houses were small circular huts, built of stakes with a double skin of wattle and a thatched roof. Their distribution in the region is dispersed and widespread. The Archaeological Inventory of North Galway lists 1104 examples while the Archaeological Inventory of Galway (west) lists 135.

The larger hillforts and enclosures are either large secular settlements, dating to the Late Bronze Age or Early Iron Age, linked to large 'royal' sites or may be associated with pre-Norman monastic settlements. Limited fieldwork has been carried out on these monuments.

There are a number of promontory forts such as the example found at Renvyle Point and west of Clifden at Fahy. There are a large number of crannogs also known of, mainly found in the blanket bogs of the lowlands (Robinson, 1997, 334).

There are a large number of Early Historic recorded monuments in Galway city. In particular there are a number of holy wells located to the east of the medieval town (GA094-096-- , GA094-097-- & GA094-098--).

2.2.3 Later Historic Period to Modern Period

Galway lies at the mouth of the river Corrib which drains Lough Corrib into the northern side of Galway Bay. Traditionally a village called Baile an Sruthán stood here prior to the Anglo-Norman invasion and given its strategic position and importance as a crossing to west county Galway, this is probable.

"The name Galway is believed to have derived from the River Corrib, which was once known as Abhainn na Gaillimhe, the Galway River, or from a mythical character, Gailleamh, who drowned in its waters. The earliest reference to this place name mentions an earthwork fortification erected by the native Irish in 124, Dún Gallimh, the fort of Galway. Nowadays Gaillimh is accepted as a derivative of gall and amh, two words that seem to denote a stony river" (Spellissey, 1999, 29).

The town is first recorded in 1124 as the castle of Bun Gaillimhe, built by Turlough O' Connor the King of Connaught at the crossing point. Little is known about the form or location of this structure, but it is likely that it was replaced by the Anglo-Norman Castle (Walsh, 2001, 10).

In 1230, Richard de Burgo, came to take possession of Connaught, lands he had been granted. He met the O'Flahertys and the O'Connors at the river crossing and was repelled but returned two years later and succeeded in building a castle, but this was retaken in 1233 by Felim O'Connor. De Burgo returned in 1235 and subdued Felim with a much larger army and established a base, dividing his lands amongst

his followers but retaining the plains of Galway and Mayo for his own use. The town, as part of the manor of Loughrea grew up around the castle, acting both as a important crossing but also as a centre of trade. The castle, which stood off present day Flood Street, was partially excavated in 1999.

In 1247 the town was burnt by the Irish although the nature of the settlement at this time is not clear. Both castle and town were burnt again around 1266-70. Around 1270 a murage charter was granted by Richard's son Walter, allowing the citizens the right to levy tolls on goods to pay for the construction of town walls. Two stretches of these walls survive, the first within the Eyre Square shopping centre and the second close to the 'Spanish Arch'. Stretches of the foundation of this wall have been excavated. Walter's son, Richard the Red Earl, was one of the most powerful Anglo-Norman magnates and built the Hall of the Red Earl which was a prominent landmark in the town until the seventeenth century. The remains of this were excavated in the late 1990s and can be seen now in Flood Street. It was Richard's cousin William who supposedly brought the Franciscan Friars to Galway. They established themselves on the small St Stephen's island just outside the town.

In the fourteenth century, the grip of the de Burgos on the city was lessened. Infighting and disputes arose between Macwilliam Oughter who controlled the lands around Galway and the crown who took the lands in 1381, to the opposition of the townsfolk. There were disturbances in 1385 and open revolt three years later. Richard II visited the town in the winter of 1394-95 and knighted Oughter, pardoning the town and granting privileges which wrested influence from the de Burgos. In November 1395 Richard granted the town a new and perpetual murage charter and the town's first Royal Charter, raising the town to the status of Royal Borough. This move, also an attempt to take power from the de Burgos, allowed the townspeople to elect a Sovereign and gave them a greater independence. MacWilliam sacked the town in 1349 and in a placatory measure by Henry IV was granted deputy of Connaught in 1402.

Galway continued to grow through the 15th century importing mainly wine, iron and salt with exports of hides, cloth and fish. In 1461 it was granted the right by Edward IV to mint coins as well as a further charter sealing the existing privileges and granting the right to exclude from the town anyone they wanted including the MacWilliam Burkes (formerly de Burgo). In 1484, the town was given leave to elect its own Mayor, bailiffs and corporation. At this time the town was effectively controlled by a small number of wealthy families who strengthened their ties by intermarrying. "Their descendants with a certain nostalgic hindsight, would honour them with the appellation 'Tribes of Galway'" (Walsh, 2001, 18).

In 1504, the MacWilliam Burkes (formerly de Burgo) again took Galway, however they were ousted by the Kings deputy, the Earl of Kildare. The late 15th and following 16th century were both periods of growth in Galway. The Augustinian and Dominican orders arrived and there was an increase in construction of new buildings, much of it allowed by the fire of 1473 (Walsh, 2001, 19).

The Lynch family had long held land in this area and since the 16th century at least owned the castle at Doughiska near Merlin Park. By the 19th century the Lynch lands still extended this far east and included

land in the townland of Rahylinn near Merlin Park Demesne. This is probably the Rahylinn referred to in the document giving a list of the lands owned by St. Nicholas' Collegiate Church in 1637.

2.2.3.1.1 Merlin Park

The main house of the later demesne of Merlin Park was built by Charles Blake in the first decade of the 19th century. Charles Blake was descended from the Blakes of Ardfry, County Galway. Under the Acts of Settlement, they were granted the lands of Ballyglass, including Coolcon Castle, now situated in the parish of Kilcommon, barony of Kilmaine and lands in the barony of Dunmore, County Galway, amounting to more than 3,000 acres. At first they held Moyne on lease from the Earls of Clanricarde and in 1711 purchased the fee simple. In 1691 they bought the lands of Ballintober, barony of Carra, from the Blakes of Ardfry. The Ballintober lands were sold to the Moores of Moorehall in 1793.

Merlin Park house was built for a cost of 12000 pounds in 1812 and after only 40 years occupancy was sold was advertised for sale in the Encumbered Estates' Court in 1852. Prior to the auction the "Description Particulars" of the estate read as follows:

"The Demesne of Merlin Park is well walled, and almost unrivalled in its extensive views of sea and mountains. Its undulating slopes are picturesquely wooded; its walks, its woods, its drives, its swallow holes, its fine old castle, its rocky winding stream foaming pools or "Bowls of Water; " as its name denotes, combine to render it an attractive and desirable estate. There are 224 acres in arable land, and. five acres in roads and drives. The Mansion in Merlin Peak is a spacious and commodious residence. The reception and bedrooms are unusually large and lofty, with a noble hall and staircase, all in order and repair, well suited for the establishment of a Nobleman or Gentleman of fortune. The Gardens and Orchards, comprising of 4 acres, and enclosed by a wall 15 feet high, produce a climate capable of growing the finest fruit and rearing the most delicate shrubs and trees. There are over 100 acres of the whole estate under plantations, which are principally old, and have been valued at over £4,000, and there are a great many very ornamental trees in the grounds.

The Mansion House and Demesne of Merlin Park, on this part of the Estate, is a most superior and desirable residence. The House is a modern building with every appendage suitable for the residence of a gentleman and fit for immediate occupation; it stands 90 feet above the level of the sea, and commands beautiful and extensive views of the Atlantic Ocean, Galway Bay, and the surrounding scenery. The Plantations are extensive and highly ornamental. "

The house and land were bought by Henry Hodgson, who had mining interests in County Wicklow, Europe and had orange plantations in Florida. Following his death the estate was purchased in 1876 by Robert W. Waithman, a wealthy magistrate in 1876. It remained in the hands of the Waithmans until 1945 when it was acquired by the Health Board and developed as a hospital and tuberculosis sanatorium.

2.2.4 Archaeological Heritage

2.2.4.1 World Heritage Sites

There are no World Heritage Sites or potential World Heritage Sites contained in the Tentative List of Candidate Sites within 5km of the study area.

2.2.4.2 National Monuments in State Care, Guardianship or under Protection Order

There are no National Monuments in State Care (Ownership or Guardianship) or Monuments that are subject to a preservation order within the vicinity of the proposed development. The nearest national Monument is Merlin Park Castle (Merlin Castle) (Nat. Mon. No. 609, GA094-023---- located roughly 600m to the northwest. This is described below in section 2.2.2.3.

2.2.4.3 Record of Monuments and Places/Archaeological Survey Database/Register of Historic Monuments

The following sections contain information relative to the Register of Historic Monuments (RHM), the Record of Monuments and Places (RMP) and the Archaeological Survey Database (ASD). Archaeological monuments are general registered by the National Monuments Service using a Sites and Monuments Record (SMR) number.

The closest recorded monument is GA094-024----, a designed landscape feature which is located 50m to the southeast. There are 3 additional recorded monuments within 500m of the subject site. These sites are listed below.

GA094-023----

Castle - tower house.

MERLINPARK.

Distance: 450m.

Description: On a short rise in the former demesne of Merlin Park House. This Nat. Mon., known as 'Doughiske Castle' until the mid-18th C, was in existence in 1574 when it was in the possession of Stephan Lynch (Nolan 1901, 113). It consists of a well-preserved four-storey rectangular tower (L 8.95m, Wth 7.85m) over a basement. A doorway, centrally placed in E wall, gives access, via a lobby, to ground floor, to spiral stairs in SE corner and to basement stairs in NE. There are subsidiary chambers and latrines to S of the main rooms on ground and 1st floors and an intramural passage in same position on 2nd floor. Stone vaults exist between basement/ground floor and 2nd/3rd floors. Fireplaces occur in N wall of the basement, 2nd, and 3rd floors. Two small chambers (one concealed) occupy the thickness of the vault between the 2nd/3rd floors. The gabled roof contained a garret and had wall-walks with machicolations at parapet level on N, S and W walls. Apart from the horizontal gun slits on ground floor, all the windows are either single or double lights with ogival heads. A sheela-na-gig (GA094-023001-) figure is carved onto the spandrel of a single-light ogee-headed window on 2nd floor of S wall. A

later extension adjoined at E, where traces of a high-pitched roofline, a doorway inserted off the spiral stairs and a raised platform indicate a former two-storeyed building, possibly of 17th-C date. (Lynch Athy 1914, 146-52; O'Flanagan 1927a, Vol. 1, 330)

This monument was taken into Ownership under the National Monuments Acts 1930 to 2014 - National Monument 609.

GA094-023001---

Sheela-na-gig.

MERLINPARK.

Distance 480m.

Description: Discovered in 2002 by Martin Fitzpatrick (Freitag 2004, 138), this sheela-na-gig figure is carved onto the spandrel of single-light ogee-headed window on the second floor of the S wall of Merlin Castle (GA094-023----). Described by Freitag (ibid.) as an 'unusual figure because sitting upside down, below decorative motif; in opposite corner there is a six-petal marigold. Round head with facial features discernible; breasts indicated; both arms straight and in front of body, hands joined to touch long vertical slit indicating vulva'. A 3D model can be accessed on the Sketchfab website at: <https://skfb.ly/68uyw>

GA094-028----

House - 18th/19th century.

MERLINPARK.

Distance: unknown – no longer extant.

Description not available. No longer extant.

GA094-024---

Designed landscape feature (tree ring).

MERLINPARK.

Distance: 500m.

Description not available on ASD.

'A house on the outskirts of Galway, built by Charles Blake in the first decade of the 19th century. Bought by Henry Hodgson in the Encumbered Estates' Court in 1852. It was held in fee by him at the time of Griffith's Valuation and valued at £65. Merlin Park was purchased by the Waithman family in 1876 and in their ownership until 1945. Thereafter it was compulsorily acquired for the building of a TB sanatorium. The house no longer exists, and Merlin Park Hospital now occupies the site'².

² Retrieved from <https://landedestates.ie/property/681> 5th December 2024.



Plate 1 Merlin Park (Photograph courtesy of Dr. Patrick Melvin & Eamonn de Burca)³.

³ Retrieved from <https://landedestates.ie/property/681> 18th July 2024.

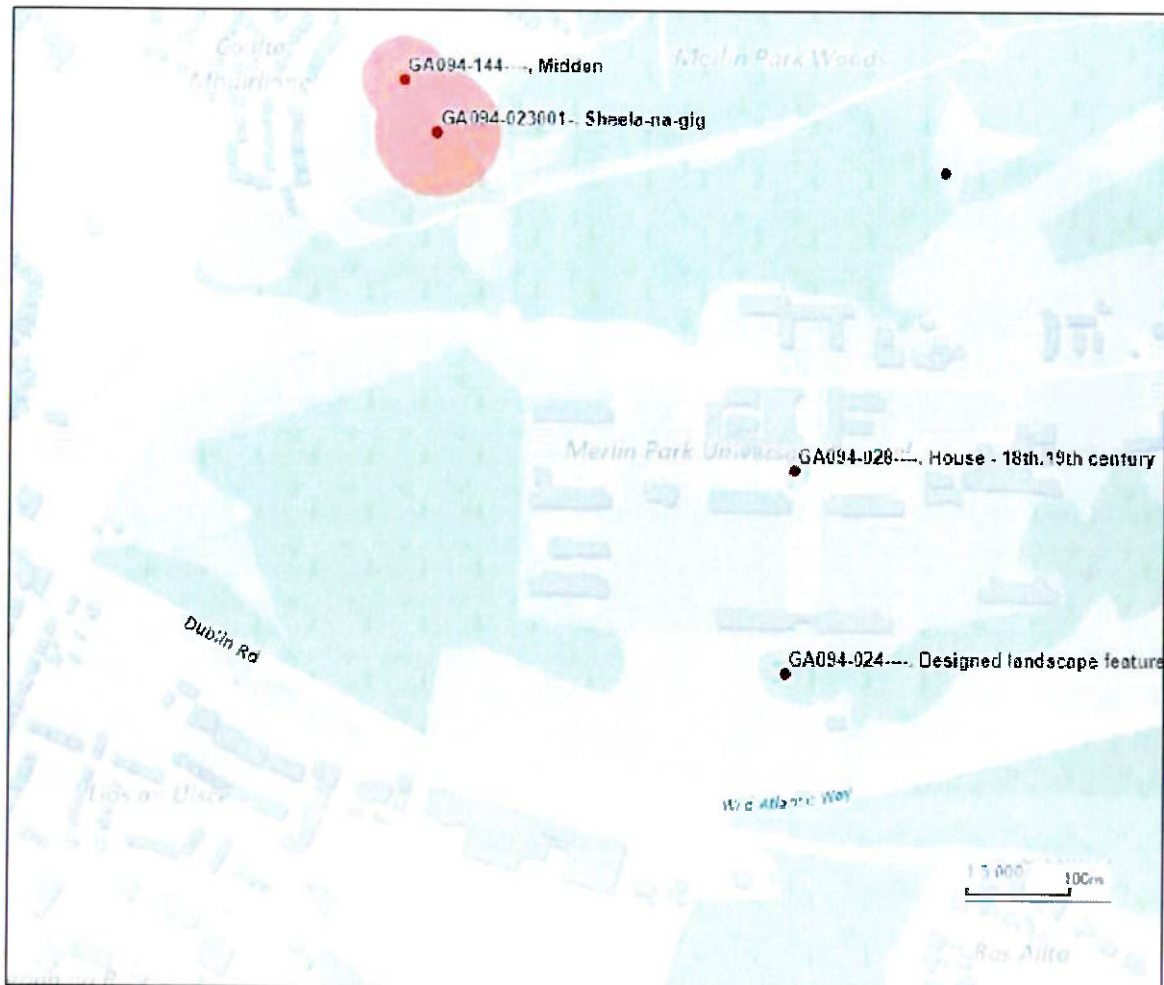


Figure 3 Showing nearby recorded monuments

2.2.4.4 Map Regression

Early 16th and 17th century maps depicting the area (such as Browne's Map of 1584) show little detail. Petty's Down Survey (1656-8) of the area were destroyed by fire in 1711.

By 1778, with the publication of Taylor and Skinners Road Map of Ireland, the legend notes 'Cas. Rus.' at roughly the location of Merlin Park Castle to the northwest of the subject site.

The First Edition Ordnance Survey 6" Map, surveyed in 1838, depicts the subject area in pre-famine times. The map shows the landscape of the Merlin demesne and depicts the tree ring clearly. This feature is also depicted on the later 25" map.⁴

The OS first edition map shows the demesne of Merlin Park as developed by the Blakes circa 1830, the demesne occupies a wedge-shaped block north of the Dublin road and consists of enclosed parkland of

⁴ All OS maps viewed at <https://heritagedata.maps.arcgis.com/> 18th July 2024

pasture and woodland containing the ruins of Merlin Castle and the newer Merlin Park House with outbuildings and an adjacent formal garden. The demesne is accessed via a gate lodge and driveway. The 25" map dated 1897-1913 shows Merlin Park demesne much as it was with the addition of a lime kiln.

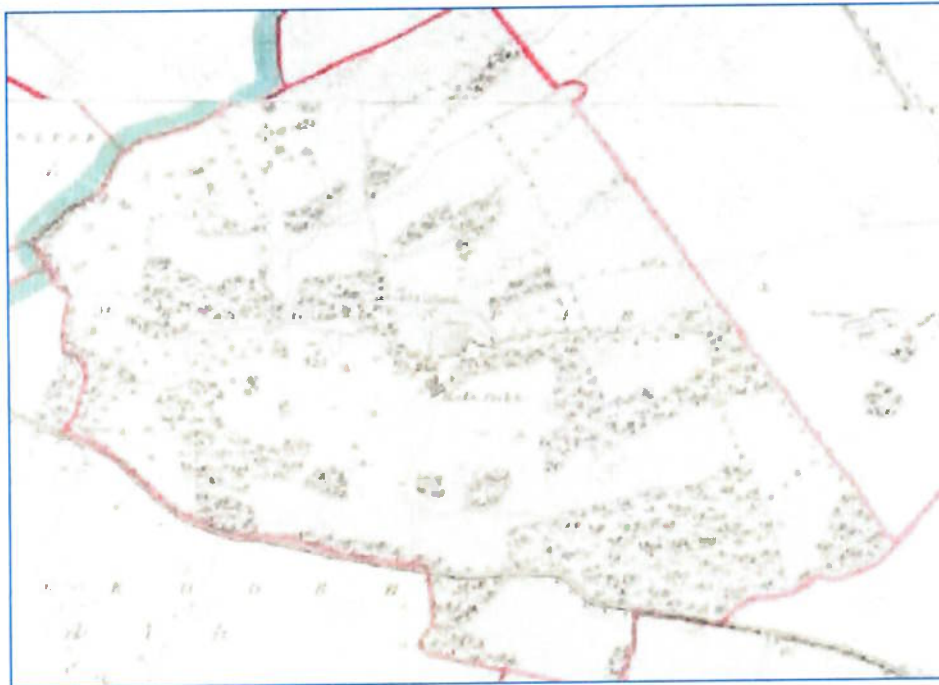


Figure 4 Extract of 1st Ed. OS showing Merlin Park.

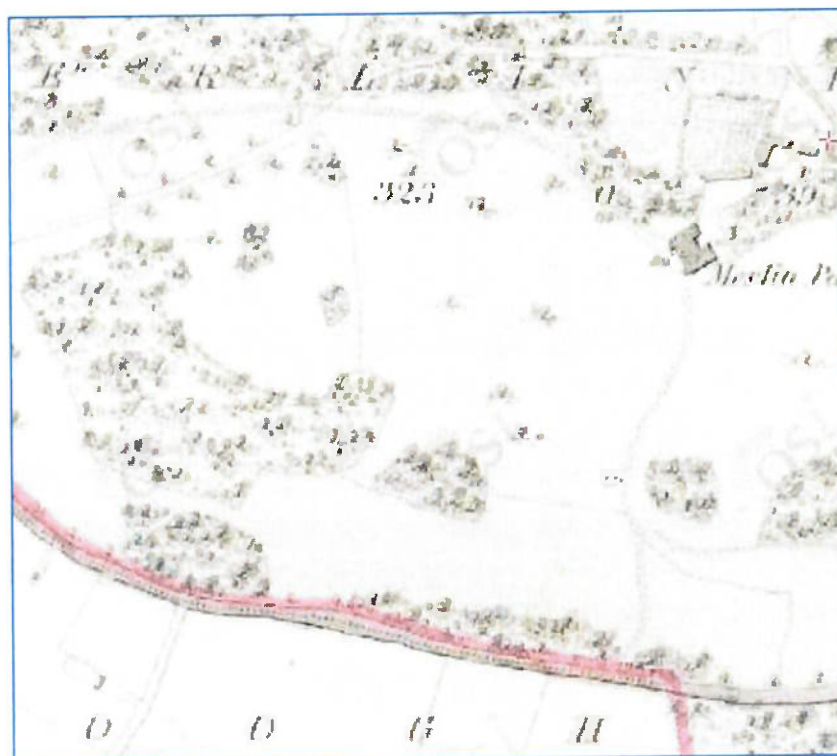


Figure 5 Subject area, showing former site of Merlin Park House and woodland.

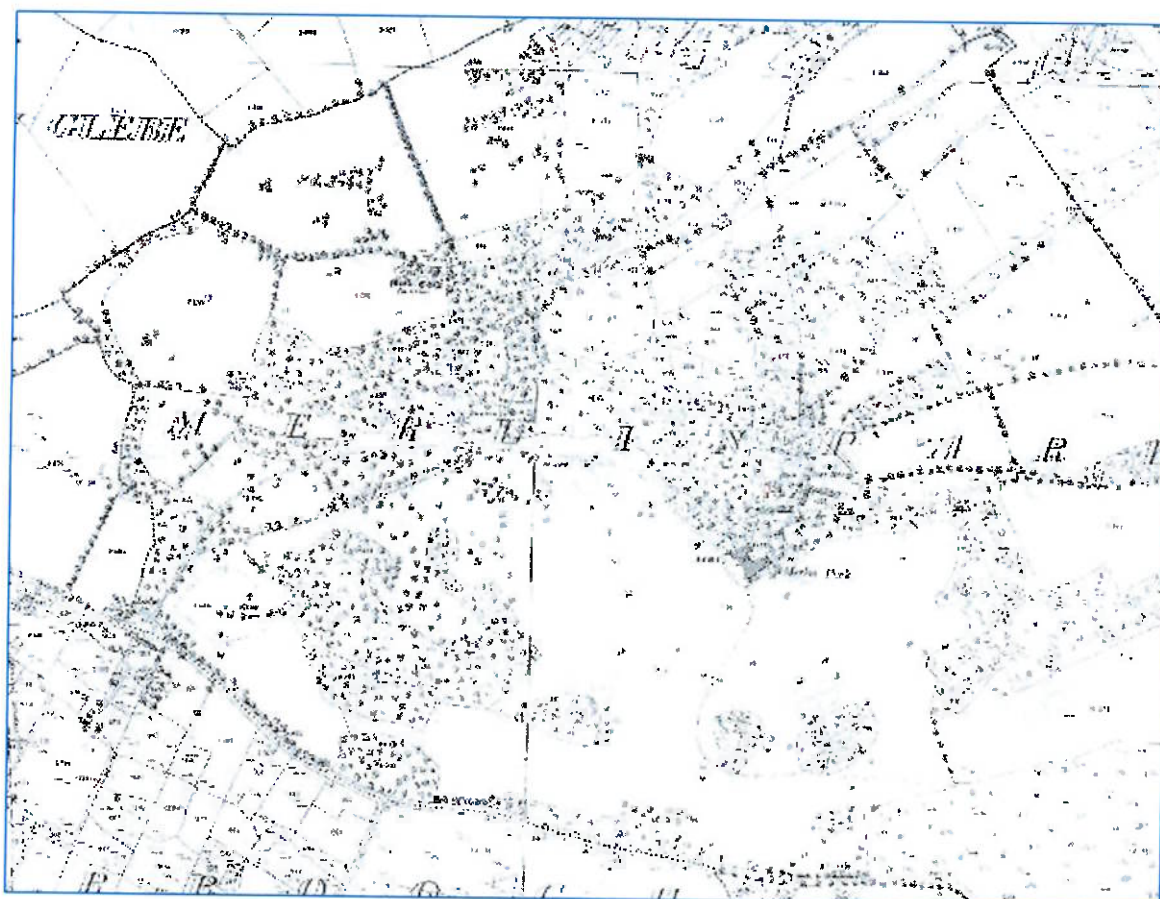


Figure 6 Extract from OS 25'' map showing subject area.

2.2.4.5 Aerial Photography

A review of available aerial photographs was undertaken to identify any previously unrecorded anomalies of historical potential. Inspection of the aerial photographic coverage of the area held by the Ordnance Survey (1995-2013), Google Earth (2002-2020) and Bing Maps was completed. Nothing of archaeological significance was noted.

2.2.4.6 LiDAR Review

A review of the Geological Survey Ireland Open Topographic Data Viewer was carried out⁵. The tile for the subject site revealed nothing of archaeological significance.

2.2.4.7 Topographical Files of the National Museum of Ireland

A review of the online resource www.heritagemaps.ie was completed. No finds are recorded in the vicinity of the subject site. Due to current company policy regardless indoor spaces and COVID 19 the topographical files in the NMI were not inspected. It should be noted that not all recorded finds in the

⁵ <https://dcnr.maps.arcgis.com/apps/webappviewer> viewed 18th July 20248

Topographical Files are included in www.heritagemaps.ie. The review of www.heritagemaps.ie indicates that there are no relevant files in the immediate vicinity.

The following find was recovered from Merlin Park and is filed in the topographical files of the National Museum of Ireland:

Townland: Merlin Park

Parish: Oranmore

Barony: Galway

Reg Number: 1940:119

Find: Polished Stone Axe

Description: Probably belong to the very end of the Stone age or possible the beginning of the Bronze age.

2.2.4.8 Previous Archaeological Fieldwork in the vicinity

There are four records in the vicinity of the subject site. These are summarised below.

County: Galway **Site name:** GALWAY: Merlin Park

Sites and Monuments Record No.: SMR 94:23 **Licence number:** 02E1364

Author: Martin Fitzpatrick, Arch. Consultancy Ltd.

Site type: Habitation site

Period/Dating: Undetermined

ITM: E 529931m, N 725147m

Nineteen test-trenches were excavated across three fields to the north of Merlin Park tower-house before the construction of a Galway Corporation housing development. The stratigraphy across the site was relatively uniform throughout. A thin sod layer overlay an orange/brown silty clay that in turn overlay a creamy white, sandy boulder clay with protruding boulders and bedrock. The depth of topsoil varied across the site, and the level of the protruding boulders and bedrock also rose and fell. The topsoil was relatively free of inclusions, and few finds were noted across the site, apart from modern crockery, ceramic tiles, occasional pottery sherds, fragments of dark and clear glass, shell and fragments of disarticulated animal bone.

A number of features were noted in some of the trenches. Substantial, linear, loose-stone dumps were noted in Trenches 10 and 13–15. They appeared just below the sod layer, were cut into the topsoil and boulder clay and seemed to be too large to represent drainage features, but this remains a possibility. Two small shell middens were noted in Trenches 7 and 14. A rough stone surface was revealed in the southern end of Trench 6. A number of worked cobbles were noted in the topsoil; however, the excavated surface was composed of rough, rounded stones. A small pit, revealed in section farther to the south, was

cut into the topsoil and boulder clay and contained a layer of charcoal-rich silt and an ash-like deposit. In Trench 5 two features were noted: a thin band of charcoal and a rectangular trench cut into the boulder clay. However, none of the features revealed could be described as highly significant, and it is unlikely that any substantial features related to the tower-house will be disturbed during construction. It is believed, however, that construction work across the development site may reveal larger shell middens and other features. It is therefore considered necessary to monitor the topsoil-stripping across the entire site.

2002:0737

County: Galway **Site name:** GALWAY: Merlin Park

Sites and Monuments Record No.: SMR 94:23 **Licence number:** 02E0113

Author: Martin Fitzpatrick, Arch. Consultancy Ltd.

Site type: Castle - tower house

Period/Dating: Late Medieval (AD 1100-AD 1599)

ITM: E 534590m, N 725941m

The archaeological brief at Merlin Park was determined by extensive groundworks that had taken place in the immediate vicinity of the tower-house in 2001. These works included the excavation of a large pit/hole to the west of the building and the stripping of large areas of ground immediately surrounding the tower-house. The ground was stripped to bedrock level and was backfilled with stone excavated from the area. After consultation, it was agreed that a programme of works should be undertaken to assess the damage and to catalogue the archaeological features/finds in the area.

A survey conducted at the site included the area immediately surrounding the tower-house, where disturbance to the original ground level had taken place. Piles of rubble to the south-west of the building were examined, and architectural fragments were collected. In addition to the disturbance caused in 2001, it was noticed that four further areas had been disturbed in more recent months. These areas are to the south-west of the tower-house, and the disturbance involved the felling of trees to accommodate corridors measuring c. 90m by 6m, which were subsequently levelled, with all works being undertaken without archaeological supervision. Deposits of disturbed shell were found in three of these corridors, with the greatest concentration consisting of a large shell midden in the second corridor from the west.

The disturbed areas to the east and south-east of the tower-house were also examined, and the removal of the stone was monitored. Two further shell deposits, which had been greatly disturbed by the previous year's work, were identified in this area. Finds from the area included occasional pottery and glass fragments, a fragment of a quernstone, architectural fragments and fragments of roof tiles. Similar finds of modern (20th-century) pottery and glass fragments were recovered from the monitoring in the north and south of the tower-house. Some 13m north-east of the building, faint traces of a structure were uncovered during the monitoring. A second structure survives c. 22m east of the tower-house.

Eight trenches were manually excavated: three to the west of the tower-house, one to the south and four to the immediate east. Faint traces of the south-facing wall of the ancillary building were visible before the testing, which sought to locate and record the other walls of the building. Trenches E, G and H corresponded with the northern, southern and western limits of the ancillary building, and their excavation revealed the walls of the structure, which measured c. 6.5m by 7.32m and had a maximum height of 2.1m. In these trenches hardcore and disturbed topsoil overlay a loose, brown, sandy clay that was probably dump material. Finds from this context included fragments of pottery and glass. The topsoil overlay a light brown, silty clay with similar inclusions. Where the walls of the ancillary structure survived, it was apparent that it was of similar construction to the tower-house. It was composed of fairly well-coursed limestone blocks with mortar throughout. Cut-and-dressed blocks were reserved for the quoin stones at the eastern end. A stone plinth extended from the base of the walls.

These results highlight the significance of the building on both a local and a national scale. Such well-constructed tower-houses with finely cut stone and decorated spandrels are a rarity in County Galway and indicate the importance of the building and its occupants from the 15th/16th century onwards. The obvious displays of wealth of the occupants are further apparent in the construction of a large extension/hall against the eastern wall of the structure. Access to this ancillary building was via a doorway in the north-east corner of the tower-house. The doorway (1.1m wide) was indicated by dressed and chamfered jambstones. Immediately east of the doorway two large limestone steps are all that survived of a stairway that ascended to the north-east corner of the tower-house, suggesting that a second doorway was situated at this level. This theory is substantiated by the identification of a stop-stone protruding from the east wall of the tower-house. This cut-and-dressed stone was the basal stone of a doorway that may have given access to the first floor of the hall and/or the first-floor entrance of the tower-house. The identification of a wall running north-south against the east wall of the tower-house and the survival of a number of protruding stones at this level suggest that the steps led to a doorway in the north-western corner of the hall building, which in turn gave access to the first-floor entrance to the tower-house. The internal layout of the hall structure is not known, as it has been backfilled with rubble. The testing also revealed an external garderobe/latrine structure that was built against the south-east corner of the tower-house and serviced the upper floor/floors of the ancillary structure. Constructed of well-coursed cut stone and with a basal batter, this feature blended in with the tower-house and the additional building. This rectangular structure measured 1.23m by 1.92m and survived to a maximum height of 2m. Ancillary buildings constructed onto tower-houses are not uncommon in Ireland and were obviously the solution to obtaining extra accommodation space. A stone hall was found in association with castle remains at Askeaton, Co. Limerick, while at Lemenagh, Co. Clare, a hall was added to a tower-house in 1643. Coolhull, Co. Wexford, is an example of a fortified house that possibly developed from the hall castle. These are three-storey structures that usually do not have a vault. The houses are more spacious and comfortable than tower-houses but have many of their defensive features. Although only the lower walls of the ancillary building survive at Merlin Park, it is evident that the stonework and dressing are similar to that in the tower-house. With only the outer walls of the building exposed, it is not possible to determine the layout of the interior, but the traces of gable surviving on the east wall

suggest that it was a three-storey structure. It is clear that, whatever the layout of this ancillary structure, its construction allowed for a greater display of wealth and a more spacious and luxurious interior.

2018:262

County: Galway **Site name:** Newcastle (Rahoon parish)

Sites and Monuments Record No.: In vicinity of GA082-071 ---- (ringfort-unclassified)

Licence number: 18E0205

Author: Frank Coyne, Aegis Archaeology

Site type: No archaeology found

Period/Dating: —

ITM: E 533688m, N 725463m

Testing. Six trenches were excavated on the site of the proposed development. No archaeological features were encountered.

2021:246

County: Galway **Site name:** Merlin Castle, Merlin Park, Galway

Sites and Monuments Record No.: GA094-023---- **Licence number:** C001031; E005313

Author: Rory Sherlock

Site type: Tower house

Period/Dating: —

ITM: E 533442m, N 725964m

A programme of archaeological monitoring was undertaken during conservation works at Merlin Castle, Merlinpark, Galway City. The conservation works included the removal of vegetation from the wall tops, and the repair and repointing of the stonework, and the installation of a lightning conductor. A significant amount of loose stone lay on the site at the commencement of the works and this material was hand-sorted under archaeological supervision and retained on site. Excavations associated with the conservation works were generally confined to a series of post-holes for a security fence, and a single drainage pit. The floor surfaces at ground-floor and top-floor levels within the building were also cleaned manually under close archaeological supervision. Several holes were also drilled, two through the lower vault of the structure and two into the basement floor, to facilitate the installation of the new lightning conductor. No finds or features of archaeological significance were uncovered during the works.

2024:173

County: Galway **Site name:** Merlin Park, Galway

Licence number: 24E0770

Author: Declan Moore

Site type: Human skeletal remains

On 30 May 2024 the author was called by the HSE as contractors employed to complete trial and slit trenches for proposed additional surface car parking in an existing green area at Merlin Park Hospital had encountered possible human remains in one of their investigative slit trenches. The trench was inspected, and a human skull was visible in the east-facing section, with disturbed bone visible in the spoil material. This trench was approximately 2m in length north south and extended to a depth of roughly 800mm with a width of 500mm. The surface (disturbed) remains visible in the spoil included a partial mandible which appeared to be that of a juvenile or young adult. Although it was difficult to tell for certain without further disturbance, the remains initially appeared to be a single complete burial which was aligned roughly north-south. The burial was located at approximately ITM 533655/725657 at a depth of 500mm below modern ground level.

The relevant authorities and the Gardaí were informed. The National Monuments Service confirmed to the applicant that, as per discussion between colleagues in the National Museum of Ireland (NMI) and An Garda Síochána, based on the preliminary observations of a Professor of Anatomy from the University of Galway and subsequent observations of Ms. Laureen Buckley (Office of the State Pathologist), they were satisfied that the human remains identified during site investigation works were archaeological in nature.

Subsequently the author and an assistant excavated the inhumation by hand on 2 and 3 July 2024. A further 5 east-west aligned grave cuts and an extended area of fill (which may represent further burial cuts) were observed in an extended area which was stripped of topsoil and sod. These burial cuts were not excavated or disturbed and were retained *in situ* after the works were complete. The single excavated inhumation was also aligned east-west.

The spoil material from the excavated slit trench had been mounded in a small spoil heap to the east of the slit trench. None of the spoil from this slit trench had been transported off site.

This spoil was spread on a layer of plastic and sifted through to recover any artefacts, especially stray bone. This work was carried out methodically and recovered a small amount of human bone.

Mechanical stripping of an extended area around the disturbed burial was carried out. The topsoil and sod (C1) consisted of a dark brown, silty clay with moderate inclusions of small stones and loose bone which typically extended to a depth of 250-270mm. Any loose bone was recovered and bagged. Excavation concentrated on identifying burials in the wider area around the known burial. It was agreed that excavation work in the wider area would cease upon identification of additional burial cuts at the level of the cuts so that additional burials could be preserved *in situ* without causing damage. A further 5 potential burial cuts/burials and an area of fill (F2) where distinct burial cuts could not be identified with certainty were identified to the north of the disturbed inhumation. F5, an east-west burial cut located to the immediate north of F7 (the disturbed burial) appeared to have been truncated by the site investigation trench, but the burial itself was undisturbed. The burial cuts were exposed and recorded

and subsequently preserved in situ and covered by a protective layer of sand and geotextile. At the northern end of the excavation area a roughly east-west possible collapsed dry-stone wall was uncovered (F1). This feature may delineate the northern extent of the burial ground.

The exposed skeleton was removed by hand and each individual bone bagged. The human remains were taken into the curation of the site director and provision was made for their secure and appropriate treatment. Digital cameras were used to record individual features, burial cuts and the disturbed inhumation and provide general shots of work in progress. Each feature/inhumation was recorded three dimensionally using a combination of scale drawings and surveying equipment.

The removal of the human remains was carried out with due care and dignity. Dr. Denise Keating (Osteologist) will examine all retrieved skeletal material.

2.2.4.9 Townlands, Townland Boundaries and Toponym Analysis

The proposed development area is located within the townland of Merlin Park. The townland name is English and does not have an earlier Irish name.

2.2.5 Architectural Heritage

2.2.5.1 Architectural Conservation Areas (ACA)

There are no ACAs in the immediate vicinity.

2.2.5.2 Record of Protected Structures (RPS)/National Inventory of Architectural Heritage (NIAH)/Industrial/Vernacular Heritage

There are two listings for structures within the vicinity of the subject site, described below.

Record of Protected Structures /NIAH				
RPS/NIAH	Name of Structure	Townland	Description	Distance
RPS - 5901	Merlin Castle/Merlin Park Castle	Merlin Park	Castle/Tower House. See section 2.2.2.3 herein.	450m to the northwest.
RPS - 5902	NA	Merlin Park	Gravestones. Two c. 17 th century gravestones, both inscribed, one dated 1650.	350m to the northeast.

2.2.5.3 *Designed Landscapes-Demesnes, Historic Gardens & Country Estates*

The subject site lies within the demesne lands associated with Merlin Park House (no longer extant).

NIAH Site ID: 5343

Barony/Municipal Borough: Galway

Parish: Saint Nicholas/Oranmore

Townland: Merlin Park

There are virtually no remaining demesne features. Parts of the decorative and structural woodlands on the site remain. Merlin Park Hospital now occupies much of the site.

2.2.6 *Folklore, Other Cultural Heritage Features and Areas of Potential*

2.2.6.1 *Rivers, Streams, and Wetlands*

Rivers and streams are important cultural as well as physical features of the landscape, and archaeological sites and features are often related with waterways including features such as fulachtaí fia, fords, bridges, and mills. Riverbanks have been favoured for human occupation since prehistoric times for their proximity to food sources and fresh water and they served as routeways, boundaries, defences and as a focus for ritual. There is no watercourse in the immediate vicinity.

2.2.6.2 *Townland Boundaries*

The townland boundary between Merlin Park and Murrough townland runs along the old Dublin Road and comprises a modern wall.

2.2.6.3 *Folklore Commission*

A review of the National Folklore Collection was completed on www.Dúchas.ie. There are no records referencing Merlin Park.

2.3 Fieldwork

A field inspection was carried out on the 3rd of December 2024 which entailed walking the PDA noting, and recording the terrain type and land usage, the presence of features of archaeological or historical significance and visually investigating any suspect anomalies observed to determine their nature and provenance where possible. The site could be fully accessed, and the proposed route was inspected along its full length. The existing plan for the entrance and road proposes to link an existing road in the hospital grounds to the R338, Dublin Road opposite Murrough junction. The access road exits from the old Dublin Road at Murrough junction via a townland boundary wall of relatively modern construction. The route from south to north extends northwards through woodland. Within the woodland there is a rough lane that corresponds to a gap between two wood copse's that features on the first edition map. The field boundaries in this area are in poor condition, tumbled down and overgrown with ivy. There are a number of these relict, dry stone, field boundaries within the woodland areas. These field boundaries

appear to correspond to the original field boundaries that enclosed a number of wood copses. Many of these walls have been removed throughout the old estate as the site has been developed and remodelled. The route then turns north into an open field. This field has been levelled and improved. From here the route turns north through a section of woodland that marks the fields northern boundary. There is an appreciable difference in levels between the field and woodland. No previously unrecorded features were noted along the length of the route.



Plate 2 Section of woodland at Murrough Junction



Plate 3 Open field section

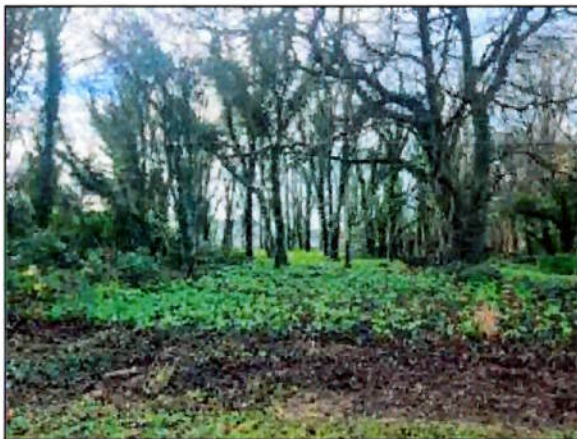


Plate 4 Woodland to north



Plate 5 Woodland to north showing variation in levels



Plate 6 Woodland to north



Plate 7 Showing field boundary clearance



Plate 8 Section of overgrown stone field wall



Plate 9 Looking north towards hospital building in background

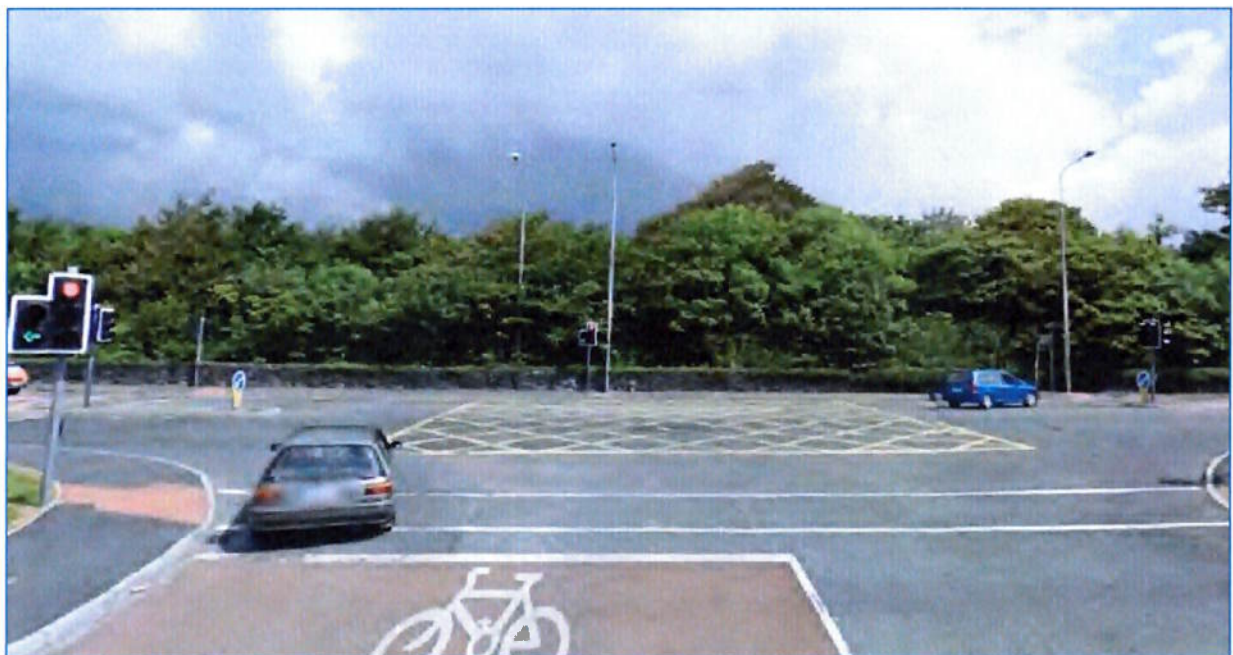


Plate 10 Looking north from Murrough Junction towards proposed entrance. The boundary wall is a townland wall but of relatively modern construction.

2.4 Potential Effects

2.4.1 Potential Direct Effects

Direct negative impacts may occur where sites of archaeological and cultural heritage significance are located within the footprint of the proposed development, which would potentially be impacted upon by ground disturbances.

In relation to the proposed development, direct, physical impacts on the archaeological and cultural heritage can manifest themselves in the following ways:

- Where an archaeological or cultural heritage site, structure, monument, or feature is located within an area where works takes place and the works either intentionally or unintentionally entail the alteration or removal of all or part of the site, structure, monument or feature a direct, physical impact will occur.
- Direct, physical impacts can also occur in gaining access to the site. Where archaeological, architectural, or cultural heritage sites, structures, monuments, or features are intentionally or unintentionally removed or altered when transporting and/or facilitating access for machinery, equipment and/or materials to or from site a direct physical impact will occur; and
- There is the potential for direct, physical impacts on previously unrecorded archaeological and architectural sites, structures, monuments, or features.

If these effects cannot be remediated, for example if archaeological deposits are destroyed during excavations, then the impacts will be permanent.

2.4.1.1 Potential Direct Effects on Recorded Archaeological Monuments

The proposed development will have no direct physical effect on known archaeological sites and monuments.

2.4.1.2 Potential Direct Effects on Unrecorded Archaeological Monuments or Features

There is a low to moderate potential to impact on previously unknown archaeological sites.

2.4.1.3 Potential direct Impacts Architectural Sites

The proposed development will have no direct physical effect on the surrounding built and industrial heritage.

2.4.2 'Do Nothing Scenario'

If the proposed works were not to proceed, there would be no effect upon the archaeological, architectural, or cultural heritage resource.

2.4.3 Potential Effects on Setting/Operational Effects

Impacts on Setting can be reduced with sensitive site development and screening. The impact of the development is usually proportional to the extent to which that development is visible to and from the extant recorded monuments and features.

2.4.3.1 Archaeological Sites

The proposed development will not impact the visual amenity of any known monuments.

2.4.3.2 Architectural Sites

The proposed development will not impact the visual amenity of the built or industrial heritage resource.

3 Mitigation Measures and Residual Effects

3.1 Mitigation Measures

It is recommended that archaeological monitoring of the subject site in areas where excavation/disturbance is anticipated be carried out.

Archaeological Monitoring is a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons within a specified area or site on land or underwater, where there is possibility that archaeological deposits may be disturbed or destroyed. The programme will result in the preparation of a report and ordered archive, (IFA, 1994, 1).

Archaeological monitoring involves an archaeologist being present in the course of the carrying-out of the development works (which may include conservation works), so as to identify and protect archaeological deposits, features or objects which may be uncovered or otherwise affected by the works' (DAHGI 1999a, 28).

A suitably qualified archaeologist should be appointed to advise the design team on archaeological matters, liaise with the relevant authorities, prepare an archaeological licence application and method statement, and complete the archaeological monitoring work. Monitoring should be carried out under licence to the National Monuments Service at the DHLGH. The application for such a licence requires a detailed method statement, outlining the procedures to be adopted to monitor, record, and recover material of archaeological interest during such work.

Should archaeological material be uncovered at any location, the feature will be summarily investigated to determine the form, age, nature, depth, and extent of the feature. The feature will be planned, photographed, and recorded to best professional standards.

Adequate funds to cover excavation, post-excavation analysis, and any testing or conservation work required should be made available if required. Upon completion of the works dissemination of the results will take the form of a stratigraphic report and full report to publishable standard lodged with the licensing section (NMS) and the Planning Section (NMS) and the National Museum of Ireland. A summary

of the report will also be submitted to the Excavations Bulletin within six weeks of the end of fieldwork. Should results warrant it, wider dissemination in the form of a full publication may be recommended.

Where archaeological material is identified, the developer will submit an archaeological mitigation strategy and a detailed method statement for written agreement with the relevant authority detailing proposed mitigation including, preservation in situ by way of avoidance or redesign, and/or archaeological excavation under a Section 26 licence in advance of development. The agreed archaeological mitigation (preservation in situ/full excavation) shall take place under licence prior to the commencement of development. The developer shall make provision for excavation, post excavation, interpretation, and publication of the results. A preliminary report detailing the findings of the agreed resolution shall be submitted to the planning authority within four weeks of the licence expiry and a full and final report shall be submitted to the planning authority within 1 year of the licence expiry date.

It should be noted that the proposed Galway City Bus Connects Scheme will involve road widening along the Dublin Road and demolition of the existing limestone boundary wall which, while of more recent construction, has a cultural heritage value as it was constructed from stone which comprised the original demesne wall. The treatment at this location is a replacement on a like for like basis along the new land take line.

The above recommendations are subject to approval by the National Monuments Service at the DHLGH and other relevant authorities.

3.2 Residual Impact Assessment

This section assesses potential significant impacts which remain after mitigation measures have been implemented.

3.2.1 Construction Phase

There will be no significant residual impacts on the archaeological resource.

3.2.2 Operational Phase

Not applicable to the archaeological and architectural resource.

3.2.3 Summary of Post-mitigation Effects

There are no predicted residual impacts on the archaeological resource.

3.2.4 Cumulative Residual Effects

No cumulative impacts have been identified upon the archaeological resource and as such there will be no residual cumulative effects.

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Appendix 2 Conventions, Directives and Legislation

Conventions

Ireland has ratified several European and international conventions in relation to the protection of its cultural heritage. This section summarises Ireland's obligations as a signatory to several International and European conventions relating to the protection and conservation of cultural heritage sites. Also included is a synopsis of existing national legislation governing the care and protection of our cultural heritage resources.

ICOMOS Xi'an Declaration, 2005

Ireland is a signatory to an international declaration sponsored by International Council on Monuments and Sites (ICOMOS), the Xi'an Declaration on the Conservation of the Setting of Heritage Structures, Sites and Areas, 2005, that endeavours to ensure the safeguard and conservation of the World's cultural heritage as part of its sustainable and human development.

EIA Directive 85/337/EEC as amended.

To assist planning and other consent authorities in deciding if significant effects on the environment are likely to arise in the case of development below the national mandatory EIS thresholds, the DHLGH published a Guidance document in August 2003.

The European Landscape Convention 2000

In 2002 Ireland ratified the European Landscape Convention - also known as the Florence Convention, which promotes the protection, management and planning of European landscapes and organises European co-operation on landscape issues. It is the first international treaty to be exclusively concerned with all dimensions of European landscape.

Valletta Convention, 1997

In 1997 the Republic of Ireland ratified the Council of Europe, European Convention on the Protection of the Archaeological Heritage (the 'Valletta Convention'). Obligations under the Convention include provision for statutory protection measures, including the maintenance of an inventory of the archaeological heritage and the designation of protected monuments and areas.

Granada Convention, 1997

Under the European Convention on the Protection of the Architectural Heritage (Granada Convention), 1997, the Republic of Ireland is obliged to maintain inventories of architectural heritage, to protect the architectural heritage and adopt conservation policies as integrated planning objectives.

UNESCO World Heritage Convention, 1972

This Convention provides for the identification, conservation, and preservation of cultural and natural sites of outstanding universal value for inclusion in a world heritage list. The World Heritage status is a non-statutory designation, and no additional statutory controls result from this designation. However, the impact of proposed development upon a World Heritage Site will be a key material consideration in determining planning applications.

Legislation

The Planning and Development (Strategic Infrastructure) Act 2006

The Planning and Development (Strategic Infrastructure) Act 2006 ensures the protection of the archaeological heritage resource by requiring that all applications under this Act are accompanied by an EIAR including information on material assets, including the architectural and archaeological heritage, and the cultural heritage.

The National Monuments Act 1930 to 2004

Irish legislation for the protection of archaeological heritage is based on the National Monuments Acts 1930 and amendments of 1954, 1987, 1994 and 2004. These acts are the principal statutes governing the care of monuments in Ireland. They provide for the protection of national monuments using preservation orders. The overall state archaeological service is provided by the DHLGH and delivered through the Planning and Heritage Section of the DHLGH and the National Museum of Ireland (Irish Antiquities Division) on behalf of the Minister.

Monuments are protected under the National Monuments Acts in several ways:

- National Monuments in the ownership or guardianship of the Minister or a local authority.
- National Monuments, which are subject to a preservation order.
- Historic monuments or archaeological areas recorded in the Register of Historic Monuments; and
- Monuments recorded in the Record of Monuments and Places (RMP).

Section 12(3) of the National Monuments (Amendment) Act 1994 provides for the protection of monuments and places in the record, stating that "When the owner or occupier (not being the Minister) of a monument or place which has been recorded under subsection (1) of this section or any person

proposes to carry out, or to cause or permit the carrying out of, any work at or in relation to such monument or place, he shall give notice in writing of his proposal to carry out the work to the Minister and shall not, except in the case of urgent necessity and with the consent of the Minister, commence work for a period of two months after having given the notice”.

The Planning and Development Act 2000

Under arrangements which came into operation on 1 January 2000 (The Planning and Development Act 2000), the system of listing buildings was replaced with strengthened procedures for the preservation of protected structures and structures in architectural conservation areas (ACA).

The Architectural Heritage and Historic Properties Act, 1999

This Act provides for the establishment of a national inventory of architectural heritage which forms the basis for recommendation from the Minister to local authorities of sites for inclusion in the local authorities Record of Protected Structures



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24027-JVT-XX-RP-X-0001– FEASIBILITY STUDY

Description	Rev.	Date	Signed by:	Checked by
FEASIBILITY STUDY	0	04/04/2025	R.Dunne / P.Murphy	L.Watson/ J.MacLean
FEASIBILITY STUDY	1	10/04/2025	R.Dunne / P.Murphy	L.Watson/ J.MacLean

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SECTION 1 - INTRODUCTION

1.1 SUMMARY

This report presents a feasibility study of the Mechanical and Electrical (M&E) services associated with the proposed new entrance and access road at Merlin Park University Hospital.

The feasibility study has been undertaken following appraisal of existing As-Built documentation and utility network drawings. We have assessed requirements of new M&E services that would be required to facilitate the proposed new road. The purpose of this assessment is to identify any potential Mechanical and Electrical constraints that may impact the proposed development.

As part of the review, existing utility infrastructure in the vicinity of the proposed road alignment has been assessed. Several services—such as ESB, Telecoms Providers (OpenEir & Virgin) and Gas Networks Ireland (GNI).

In addition, this report includes a proposed lighting design for the new road. The design has been developed with consideration for environmental sensitivities, particularly the potential to support local bat populations (as per latest Ecological report to date). As such, the lighting strategy aims to minimize ecological impact while maintaining compliance with relevant standards for safety and visibility.

1.2 DESIGN TEAM

Architect



Rhatigan Architects

Block A, Citygate, Connolly Street, Sligo

www.rhatiganarchitects.ie

C+S Engineer



RPS

West Pier Business Campus, Dun Laoghaire, Co. Dublin, A96 N6T7

www.rpsgroup.com

M+E Engineer



J.V. Tierney Consulting Engineers

The Tannery, 53-56 Cork St, Dublin, D08 P92R

www.jvtierney.ie/

PSDP



MKO

MKO, Tuam Road, Galway, Ireland, H91 VW84

www.mkoireland.ie/

QS



Lawlor Burns

81 O'Connell Street, Limerick

www.lawlorburns.com

SECTION 2 - STANDARDS AND REGULATIONS

This assessment report shall be based on best practice and, more importantly National & International Industry Standards:

- Building Control (Amended) Regulations.
- 5th Edition National Rules for Electrical Installations, IS 10101: 2020.
- IS EN 13201: 2015 Road Lighting – Part 2: Performance Requirements.
- CIBSE / SLL Lighting Handbook, 2018.
- Guide to Obtrusive light, The ILP Guidance Notes for the Reduction of Obtrusive Light GN01: 2021.
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SECTION 3 - MERLIN PARK SITE WIDE CABLING

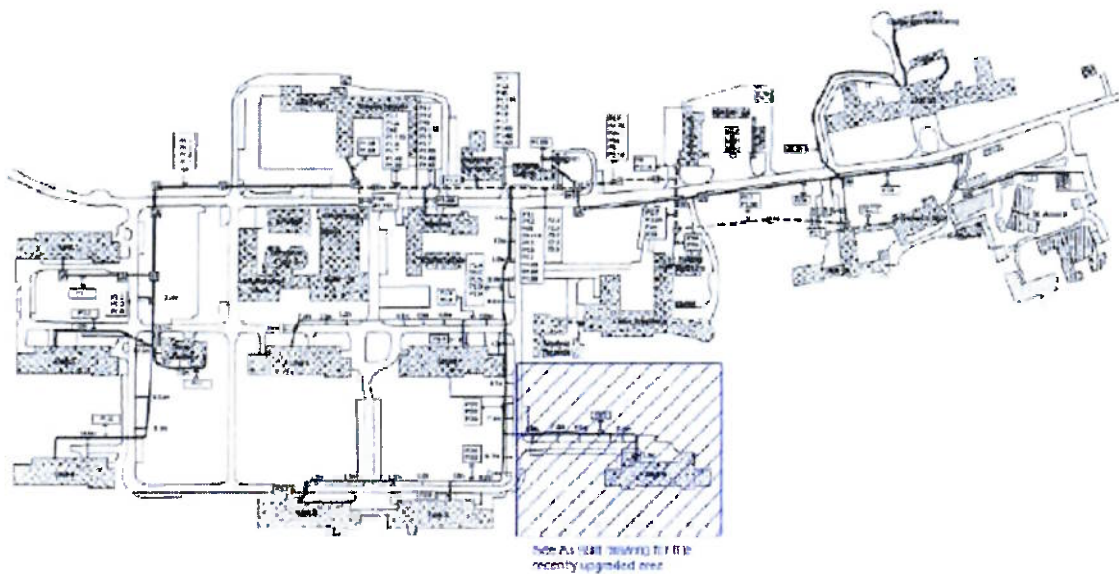


Figure 1 MPUH Site Services

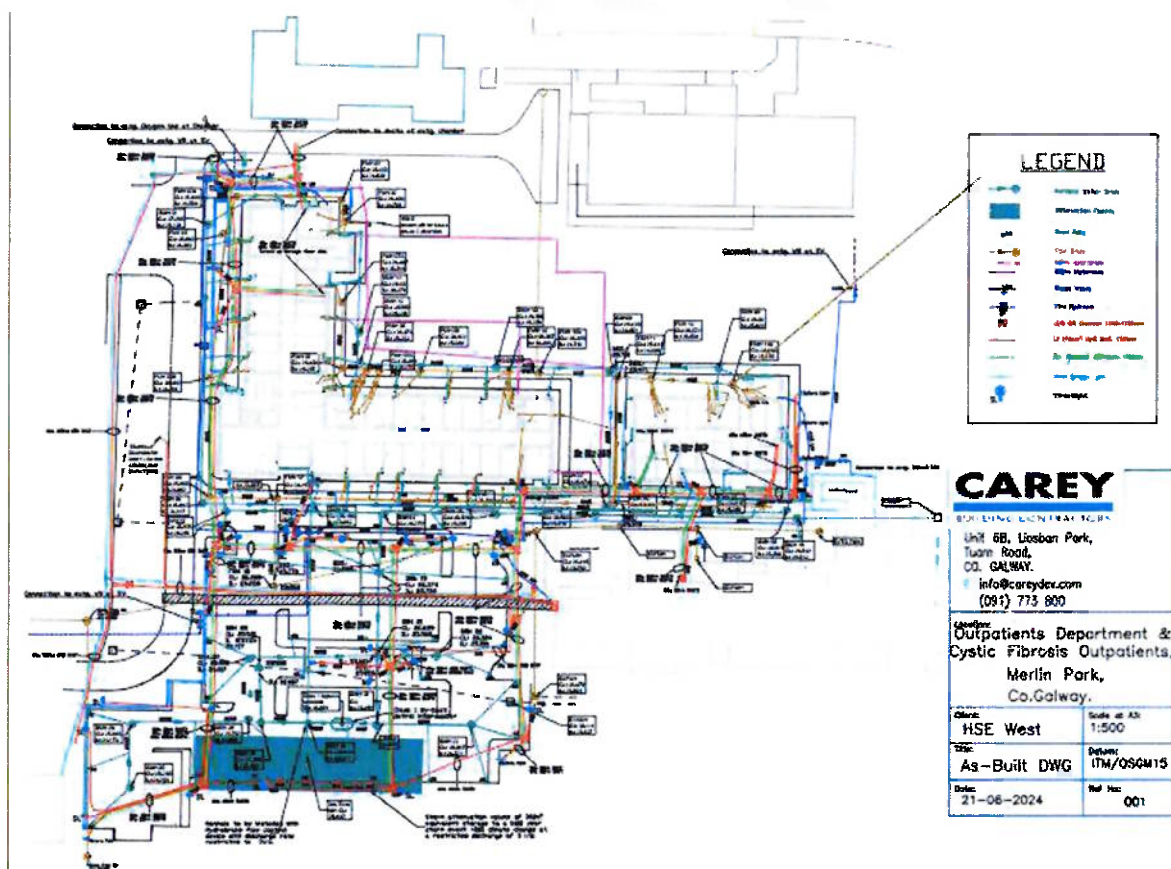


Figure 2 As-Built Layout OPD & CF

Based on a review of available site information and utility surveys, existing site cabling is not anticipated to impact the proposed new entrance road at Merlin Park University Hospital. The current cable routes are located outside the footprint of the new road alignment and associated works. As such, no diversions or protective measures are expected to be required. This would be confirmed during the further design stages, and following GPR survey, any issues identified during further stages will be addressed in coordination with the relevant utility providers or Merlin Park Estates / Maintenance to avoid disruption to existing services.

SECTION 4 - UTILITIES

4.1 ESB NETWORKS

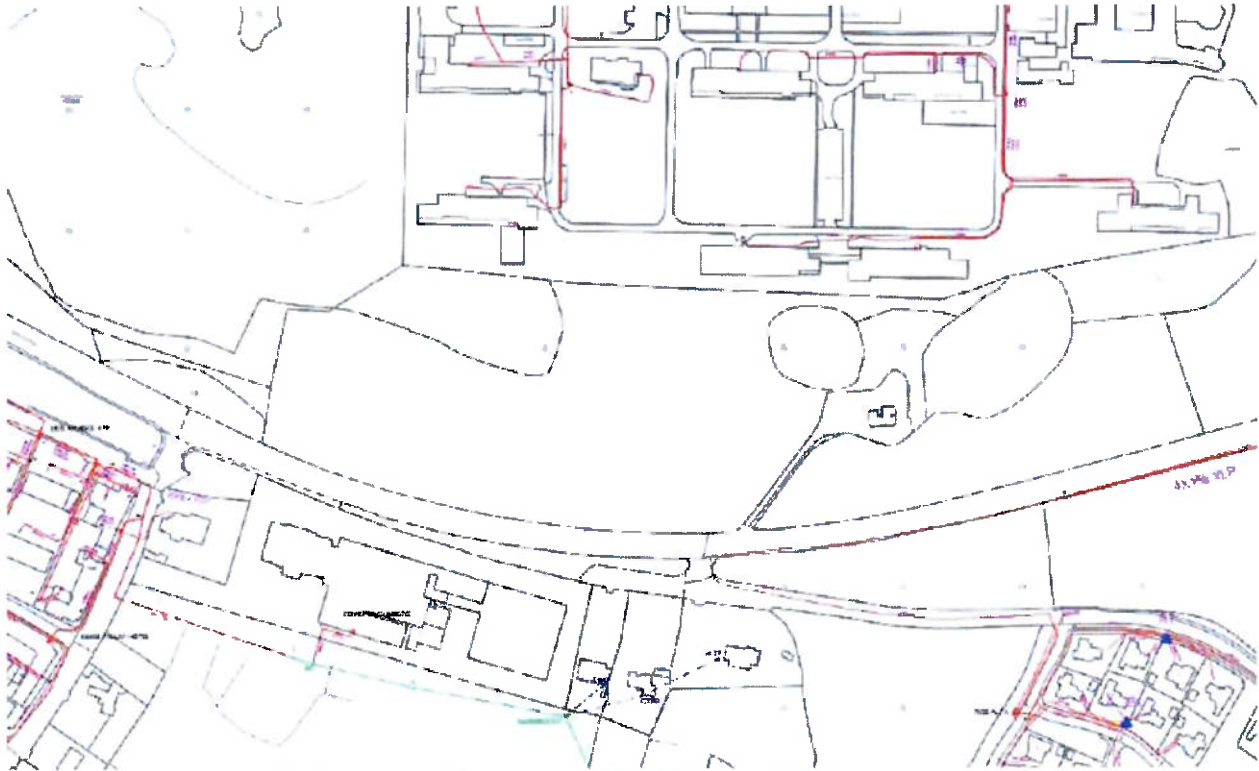


Figure 3 ESB Networks Infrastructure

A review of available utility records and site investigations confirms that there is no existing ESN infrastructure within the proximity of the proposed new entrance road at Merlin Park University Hospital. As such, it is not anticipated that the new road development will impact any ESN services.

No diversion or coordination measures are expected to be required in relation to ESN infrastructure. This can be verified following GPR survey during further stages of the design program.

4.2 OPEN EIR

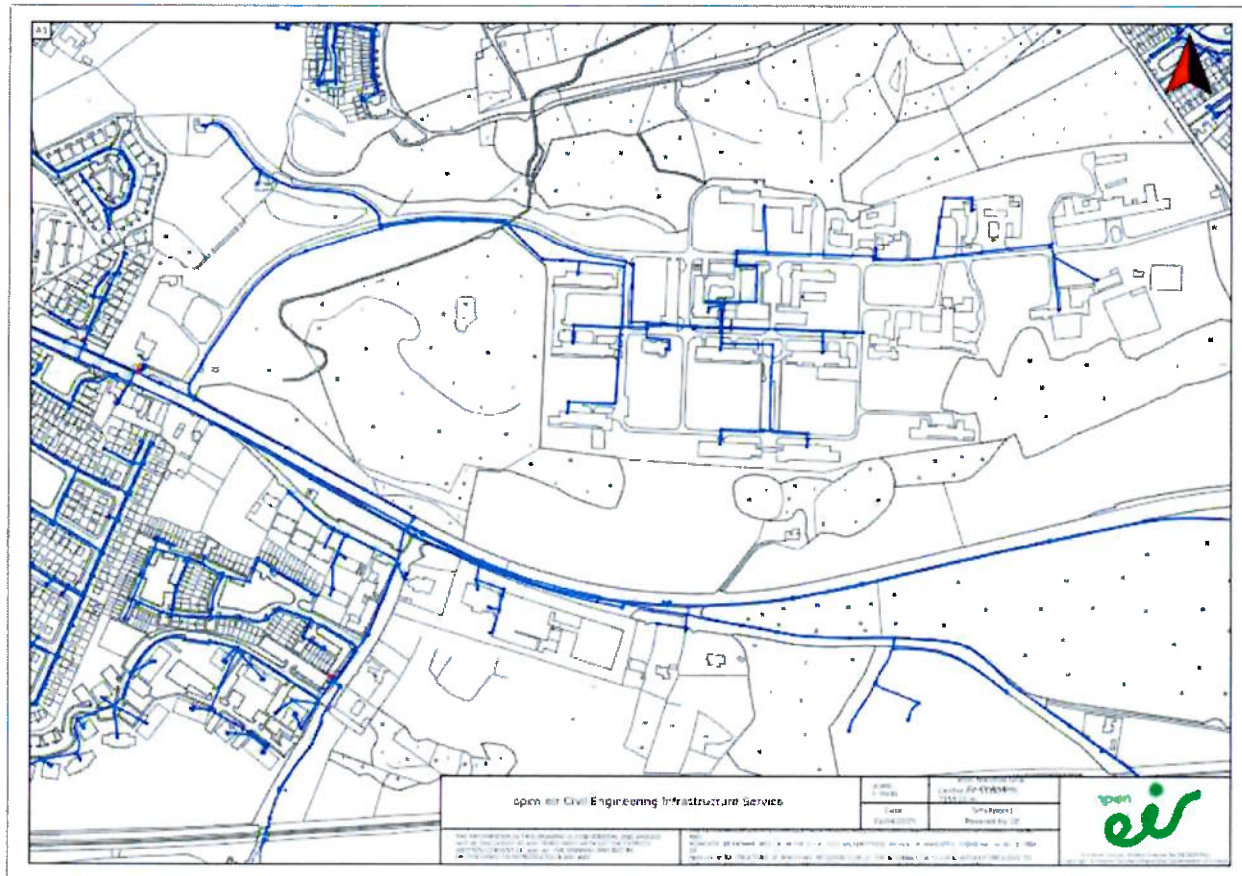


Figure 4 Open Eir Infrastructure

The existing OpenEir infrastructure has services in the vicinity of the proposed new junction along the public road, but not within Merlin Park campus itself.

In order to accurately determine the location of the existing underground cabling, a Ground Penetrating Radar (GPR) survey will be required.

Pending the findings of the GPR survey, it may be necessary to divert the OpenEir cabling to facilitate the construction of the new road. Should diversion be required, the proposed relocation route for the underground services will be agreed in consultation with HSE West Estates and OpenEir. Coordination with all other diverted or proposed utility services will also be undertaken to ensure an integrated and conflict-free design.

4.3 VIRGIN MEDIA



Figure 5 Virgin Media Infrastructure

A review of available utility drawings confirms that there is no existing Virgin Media infrastructure within the proximity of the proposed new entrance road at Merlin Park University Hospital. As such, it is not anticipated that the new road development will impact any Virgin Media services.

No diversion or coordination measures are expected to be required in relation to Virgin Media infrastructure. This can be verified following GPR survey during further stages of the design program.

4.4 GAS NETWORKS IRELAND

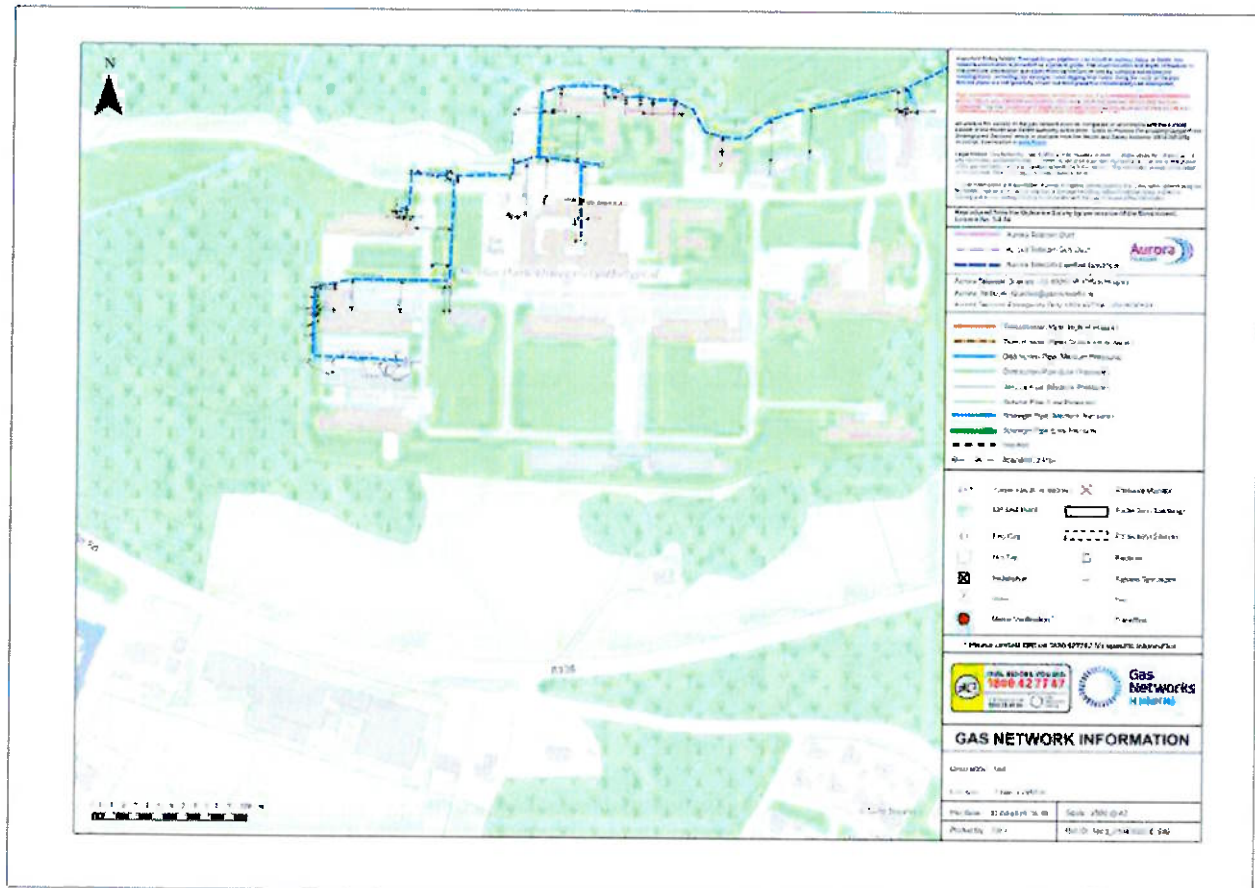
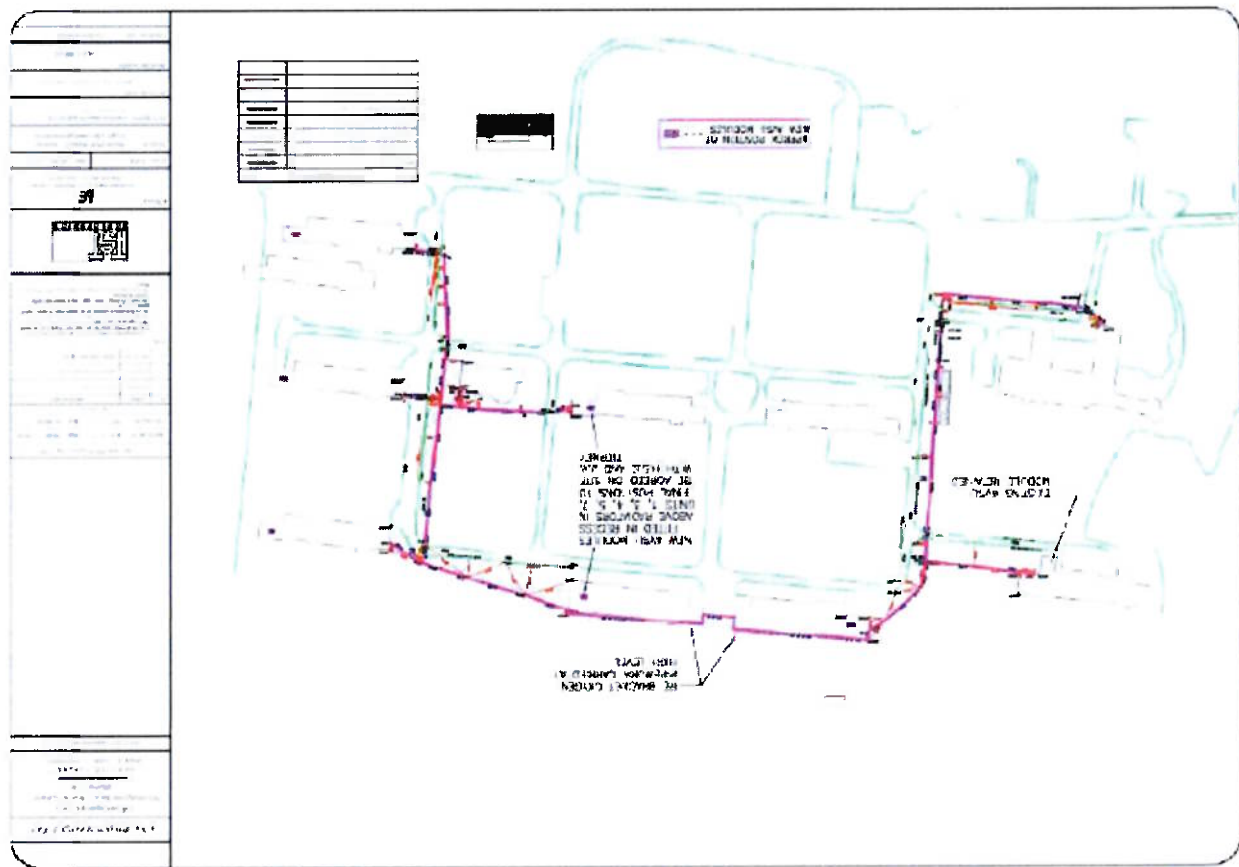


Figure 6 Gas Networks Ireland Infrastructure

A review of available utility drawings confirms that there is no existing Gas Networks Ireland (GNI) infrastructure within the proximity of the proposed new entrance road at Merlin Park University Hospital. As such, it is not anticipated that the new road development will impact any Gas Networks Ireland (GNI) services. No diversion or coordination measures are expected to be required in relation to Gas Networks infrastructure. This can be verified following GPR survey during further stages of the design program.

4.5 MEDICAL GAS



A review of the existing medical gas services confirms there is medical gas infrastructure within the proximity of the proposed new entrance road at Merlin Park University Hospital. All works to be coordinated with these services. During any excavation, existing pipework to be protected. This can be verified following GPR survey during further stages of the design program.

SECTION 5 - LIGHTING DESIGN

5.1 GENERAL DESIGN

New external lighting will be provided primarily through the installation of lamp standards equipped with energy-efficient LED technology. These lighting units will deliver appropriate levels of illumination during hours of darkness to ensure the safe movement of vehicles, cyclists, and pedestrians throughout the new entrance road, including associated car parking areas, bicycle lanes, and footpaths.

The lighting design has been developed in accordance with best practice guidelines and relevant standards, with a focus on safety, efficiency, and sustainability. Particular attention has been given to minimising light spill and glare, thereby reducing potential light pollution to neighbouring properties and areas beyond the site boundary.

Ecological sensitivities, such as the potential to support local bat populations (as per latest Ecological report to date) and the need to preserve the integrity of the night sky, have also been considered in the design. As a result, the lighting layout and specification have been selected to mitigate environmental impact while still providing functional and compliant illumination.

The following is an extract from a previous environmental report for the development of the Merlin Park Campus.

The lighting design for the Proposed Development, if required, should also be designed to minimise impacts on bats species during the operational stage of the development due to artificial lighting. Recommendations in relation to lighting should be provided in the planning application and the lighting plan should have consideration to the ILP (2023): *Bats and Artificial Lighting at Night*. Bat Conservation Trust guidance.

Figure 7 Environmental Report

JVT are proposing a lamp standard with high level lamp head for the roadway lighting.

The proposal aims to achieve the following in terms of light pollution;

- Luminaires will be specified with good optics/controls so glare and spill is kept to a minimum

The proposal aims to achieve the following other items;

- The uniformity will be better if the lighting kept to one side as opposed to staggering it both sides of the road
- We will specify a colour temperature of 3000k or less (more environmentally friendly)
- We will specify LED technology for good energy efficiency.

The luminaire Pole proposed for the Roadway lighting is a single headed 6m LED pole with high level lamp head.

5.2 LIGHTING CALCULATIONS

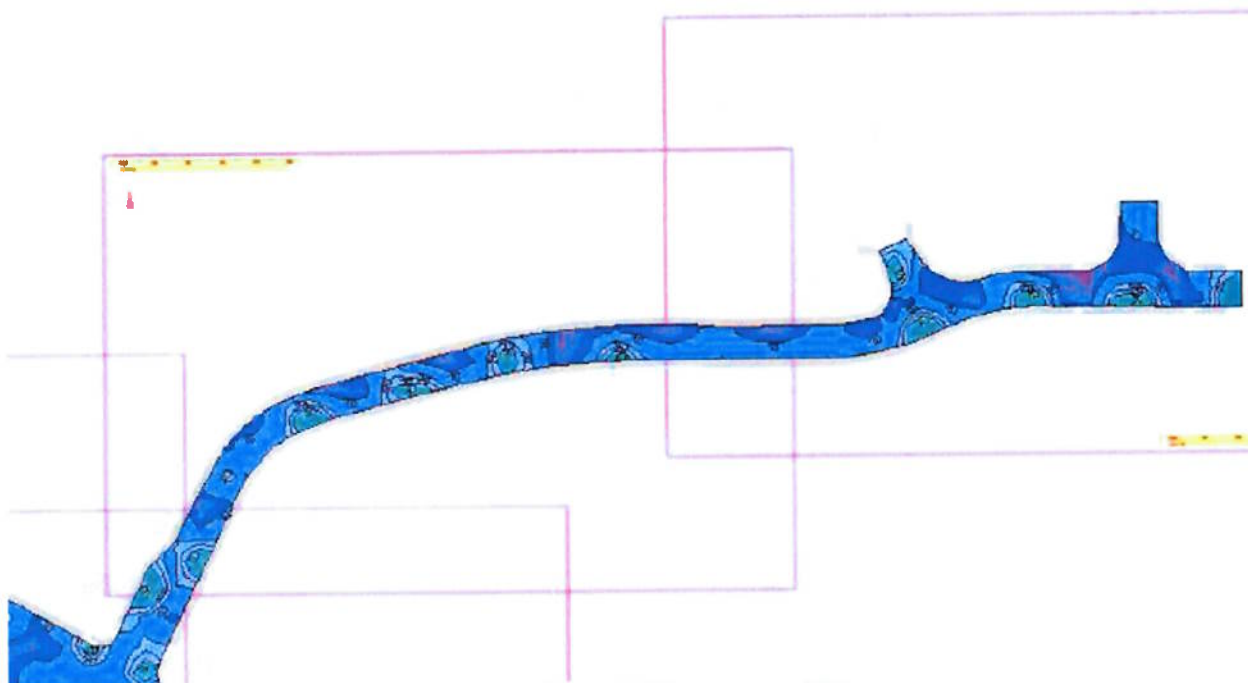


Figure 8 Lighting Illuminance Calculations

5.3 PROPOSED LIGHTING LAYOUT



Figure 9 Lighting Layout

SECTION 6 - TRAFFIC LIGHT SYSTEM

We understand where the new entrance intersects with the public road, a traffic light system will be required.

We expect the details of this requirement to be outlined during the planning process. Any traffic lighting and public lighting (along public roads) will be connected off the local ESB Network, and not Merlin Park local infrastructure, hence, this would be designed by others.

Ecological Constraints Report

Proposed New Entrance
Road at Merlin Park
Hospital, Galway





DOCUMENT DETAILS

Client: **Health Service Executive**

Project Title: **Proposed New Entrance Road at Merlin Park Hospital, Galway**

Project Number: **241002-b**

Document Title: **Ecological Constraints Report**

Document File Name: **Constraints Report F1 –2025.01.21 – 241002-b**

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Rev	Status	Date	Author(s)	Approved By
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1.

BACKGROUND

This constraints assessment has been prepared by MKO on behalf of the Health Service Executive (HSE). The assessment has been undertaken to identify the main ecological constraints associated with the Study Area of a proposed New Entrance Road at Merlin Park Hospital located in Co. Galway (hereafter referred to as the "Study Area"). The aim of this report is to present the main findings of ecological site visits undertaken by MKO ecologists Deepali Mooloo (BSc. (Hons) Marine Science and Technology, MSc. Applied Coastal and Marine Management), Timothy O'Ceallaigh (BSc. Environmental Science), and Rudraksh Gupta (BSc. (Hons) in Botany, MSc. in Environmental Sciences and MSc. in Biodiversity and Conservation) to identify the main ecological constraints associated with the development of the Study Area. This report has been prepared by Deepali and has been reviewed by Pádraig Desmond (BSc. (Hons) Ecology and Environmental Biology who has 4 years' experience in ecological consultancy. He has extensive experience undertaking ecological surveys in a range of habitats and has worked on Appropriate Assessment and Ecological Impact Assessment for a wide range of projects.

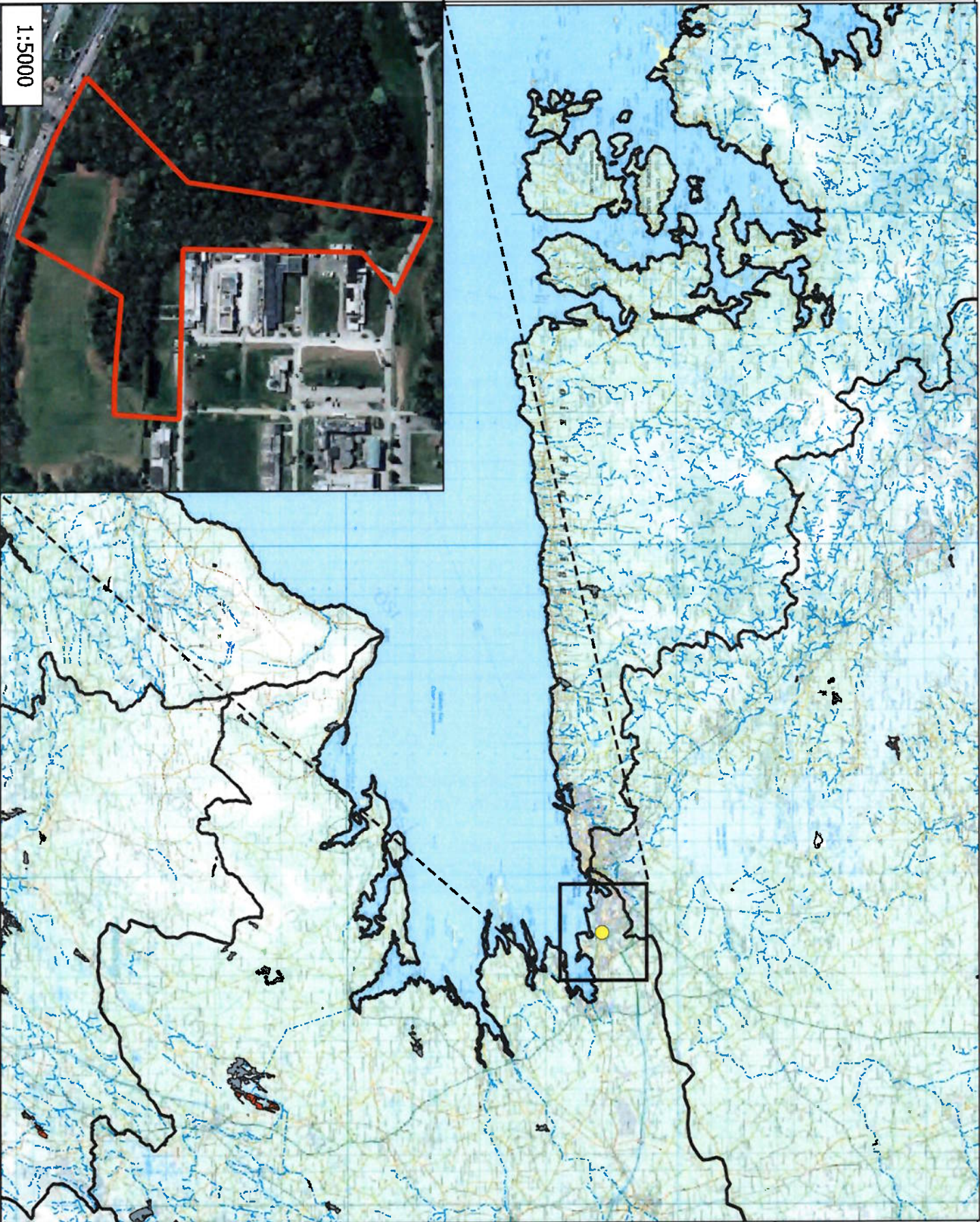
The assessment is based on a desk study carried out in November 2024 and site visit undertaken on 15/11/2024. The desk study and site visit were carried out to identify high-level ecological constraints on the Study Area in order to inform the design of any future proposals for the Study Area and thus minimise impacts on biodiversity and planning risk. The site visit also aimed to inform what further targeted habitat and species surveys would be required in support of an ecological impact assessment of proposal for the Study Area.

This report includes a resulting, high-level habitat constraints map and provides information on ecological site conditions and ecological constraints for the surveyed area. Detailed habitat mapping and detailed ecological surveys will need to be undertaken to inform any Natura Impact Statement (NIS) and Ecological Impact Assessment (EcIA) for proposals at the Study Area. Recommendations on further ecological surveys are also included within the report.

1.1

Site Location

The Study Area is located within the town of Ballybaan, Co. Galway within the premises of Merlin Park University Hospital. Ballybaan is mainly served by the R338 Dublin Road which links it to Galway city centre (4km). It is bordered by the Merlin Park University Hospital to the north and east and surrounded by Merlin Woods to the west. The Site location map is shown in Figure 1-1 below.



Map Legend

● Site location

Proposed Development site

--- WFD watercourses

□ WFD Catchments



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Site Location

Project Title	Proposed New Entrance Road at Merlin Park Hospital, Galway
Drawn By	DM
Checked By	PD
Project No.	241002-b
Figure	Figure 1-1
Scale	1:300000
Date	09.12.2024

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2. METHODOLOGY

2.1 Desk Study

The desk study undertaken to inform this assessment included a thorough review of the available ecological data associated with the study area. Sources of data included the following:

- > Environmental Protection Agency (EPA), Water Framework Directive (WFD) Mapping.
- > Review of NPWS Article 17 metadata and GIS database files.
- > Designated site data from the National Parks and Wildlife Service (NPWS).
- > National Biodiversity Data Centre (NBDC) online mapper.
- > The NPWS Flora (Protection) Order 2022 Map Viewer.
- > Environmental Protection Agency (EPA) Irish Soil Information System Mapping.
- > Environmental Protection Agency (EPA) Environmental Sensitivity Mapping.

2.2 Field Survey

A multidisciplinary ecological walkover of the Study Area was undertaken on 15/11/2024. Weather conditions on the day were windy and rainy.

The walkover surveys were designed to detect the presence, or likely presence, of a range of protected species. The survey included a search for mammal signs (bats, badger, etc.) and areas of suitable habitat to support these species as well as protected bird species. Regards was also given to potential features likely to be of significance to bats and additional habitat features for the full range of other protected species that are likely to occur in the vicinity of the Study Area (e.g. badger etc.). Surveys were also undertaken to identify any potential protected habitats (e.g. Annex I habitats). These surveys were carried out in accordance with NRA Guidelines on Ecological Surveying Techniques for Protected Flora and Fauna on National Road Schemes (NRA, 2009).

During the multidisciplinary survey, a search for Invasive Alien Species was also conducted, focusing on those species listed under the Third Schedule of the Habitat Regulations 2011 (S.I. 477 of 2011).

Habitats within the Study Area were classified according to the guidelines set out in 'A Guide to Habitats in Ireland' (Fossitt, 2000), which classifies habitats based on the vegetation present and management history. The extent of each habitat on site was mapped on site using aerial photography, handheld GPS and smartphone technology. A representative photograph was also taken for each of the habitats recorded on site.

Plant nomenclature for vascular plants follows 'New Flora of the British Isles' (Stace, 2019), while mosses and liverworts nomenclature follow 'Mosses and Liverworts of Britain and Ireland - a field guide' (British Bryological Society, 2010).

3. RESULTS

3.1 Desk Study

3.1.1 Designated Sites

The most up-to-date GIS spatial dataset for all designated sites was downloaded from the NPWS website and mapped with the Study Area shown in relation to all designated sites in Figure 3-1 and Figure 3-2. Designated sites include those listed below:

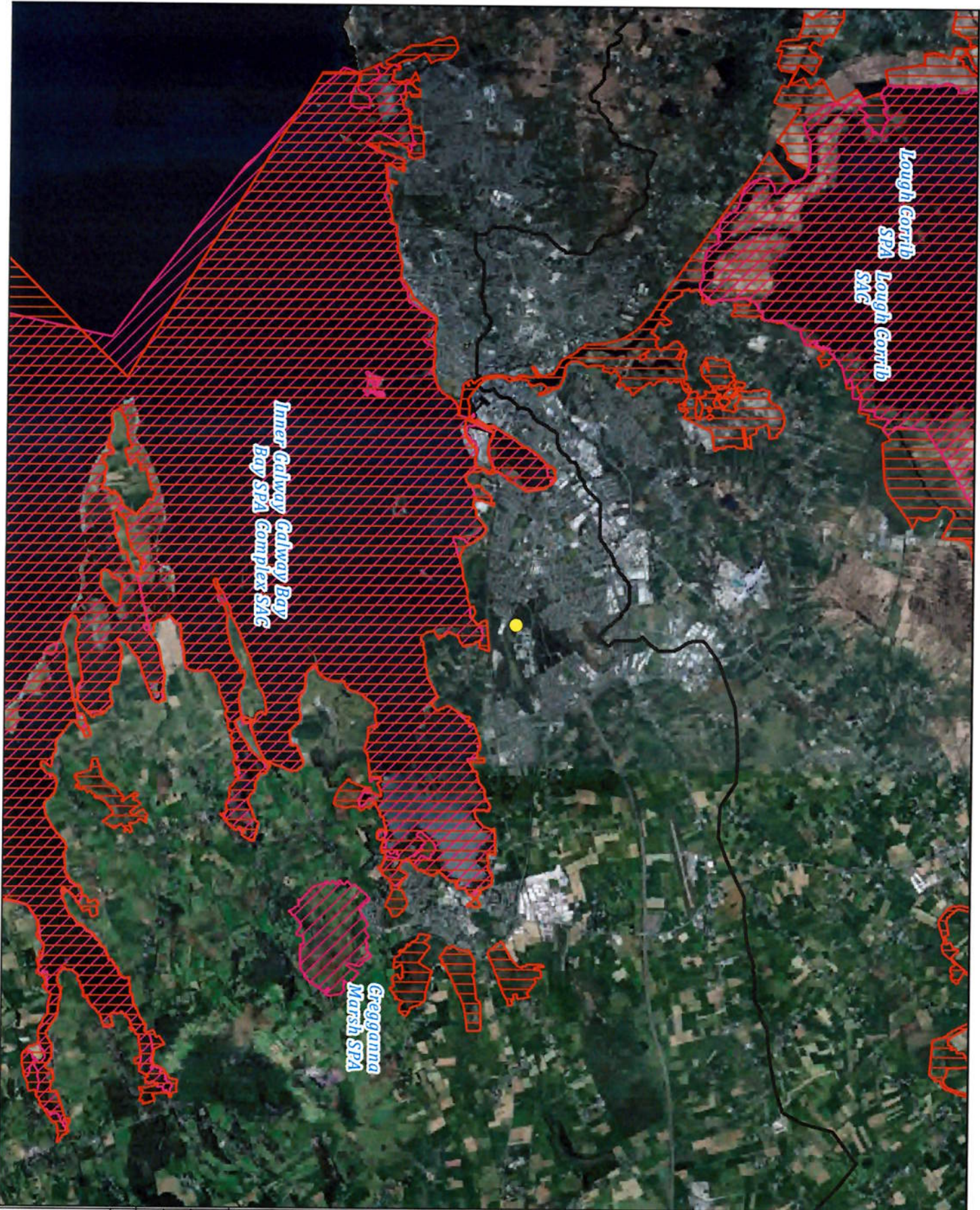
- > Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) also known as European sites– these are designated under EU Habitats Directive. SACs are designated for a range of habitats and species, while SPAs are designated for a range of rare, vulnerable or regularly occurring migratory bird species.
- > Natural Heritage Areas (NHAs) – these are designated under the Wildlife (Amendment) Act 2000 and their management and protection is provided for by this legislation and planning policy.
- > Proposed Natural Heritage Areas (pNHAs)- these sites were listed on a non-statutory basis in 1995 but have not since been statutorily proposed or designated.

Table 3-1 provides a list of Designated Sites within or in the vicinity of the study area. Maps of European Designated Sites and Nationally Designated Sites within and in the vicinity of the Study Area are shown in Figure 3-1 and 3-2 respectively.

Table 3-1 Designated sites within the vicinity of the Site

Site name	Distance (km) from Site
Special Area of Conservation (SAC)	
Galway Bay Complex SAC [000268]	0.29
Lough Corrib SAC [000297]	3.53
Special Protection Areas (SPA)	
Inner Galway Bay SPA [004031]	0.37
Cregganna Marsh SPA [004142]	4.77
Lough Corrib SPA [004042]	5.85
Natural Heritage Areas (NHA)	
Cregganna Marsh NHA [000253]	4.67
Moycullen Bogs NHA [002364]	6.68
Proposed Natural Heritage Areas (pNHA)	
Galway Bay Complex [000268]	0.29
Lough Corrib [000297]	4.07
Kiltullagh Turlough [000287]	4.61

The Study Area is located at 0.29 km and 0.37km from the boundary of the Galway Bay Complex SAC and Inner Galway Bay SPA, respectively, to the south (see Figure 3.1) and therefore, the potential for likely significant effects on the conservation objectives of these European Sites must be considered due to their proximity. In addition, Galway Bay Complex pNHA is located 0.29 km from the site and should also be considered.



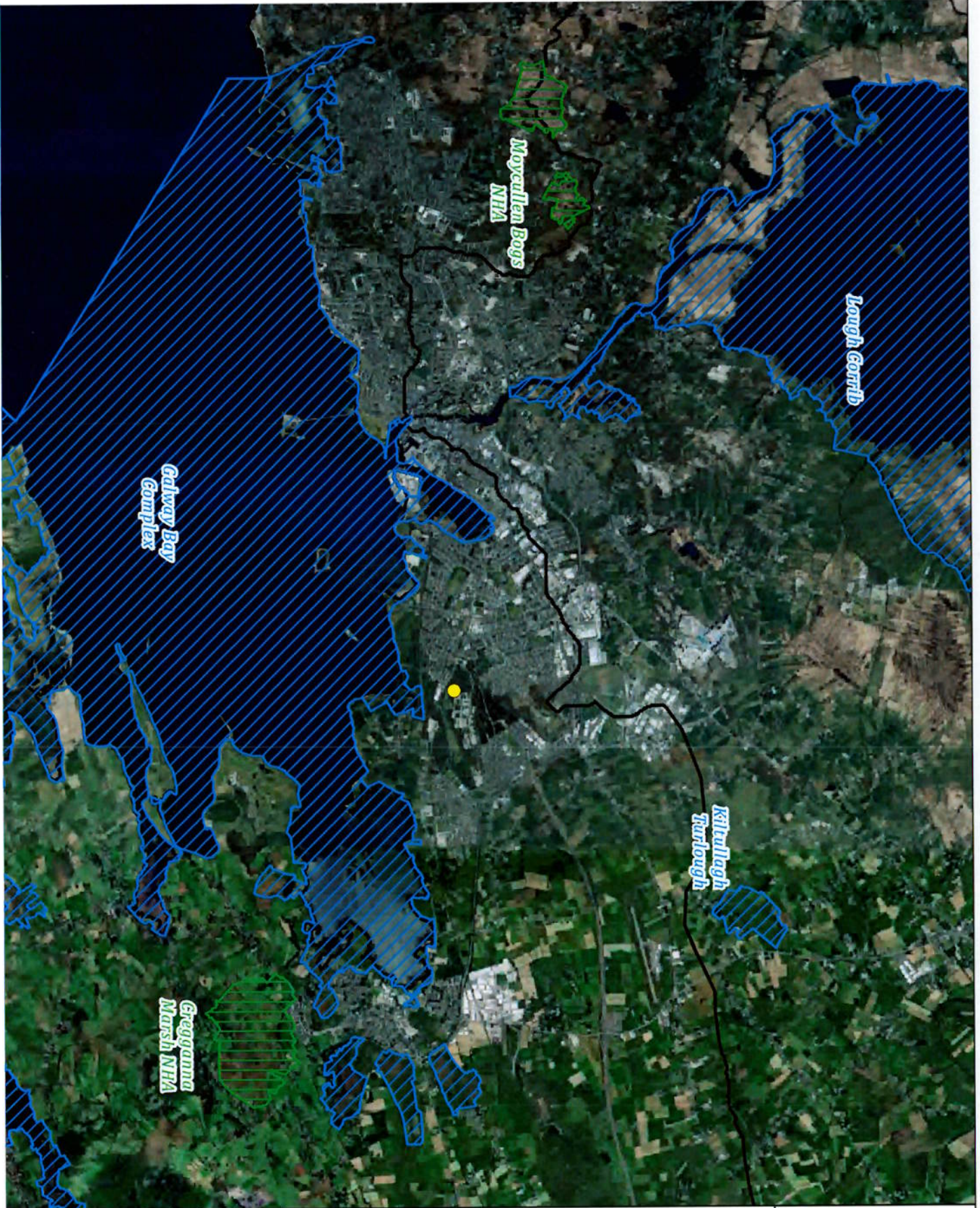
Map Legend

- Site location
- Site location
- Special Area of Conservation
- Special Protection Area
- WFD Catchments



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241002-b	Figure 3-1
Scale	Date
1:78,000	09.12.2024



Map Legend

- Site location
- Natural Heritage Areas (NHA)
- Proposed Natural Heritage Areas (PNHA)
- WFD Catchments



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Nationally Designated Sites within the likely zone of influence

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Project No.

241002-b

Scale

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09.12.2024



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3.1.2 Article 17 Habitats

The most recent NPWS data on the recorded distribution of EU Habitats Directive Annex I listed habitats was reviewed in relation to the Study Area.

There are several mapped Article 17 habitat types within the vicinity of the Study Area, see Figure 3.3 below. These include:







- > **6510 Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*)** are mapped north and south of the Study Area at approximately 100m and 115m, respectively.
- > **6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites)** are mapped approximately 230m south of the Study Area within Rosshill Park Woods.
- > **8240 Limestone pavements*** are mapped south and north of the Study Area at approximately 230m and 410m respectively.
- > **1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)** are mapped at 370m south of the Study Area
- > **1130 Estuaries** are mapped further south of the Study Area located approximately 400m from the Study Area.
- > **1140 Mudflats and sandflats** not covered by seawater at low tide are mapped 400m south of the Study Area.
- > **1310 Salicornia and other annuals colonising mud and sand** are mapped at 725m south of the Study Area.

3.1.3 Woodland Databases

The NPWS Ancient and Long-established Woodland database as well as the Native Woodland Survey 2003-2008 databases were searched. There was no woodland in the vicinity of the Study Area mapped as long-established woodland. The nearest mapped Annex I woodland is 91D0 Bog woodland located 8.0 km north-west of the Study Area. Indicator species such as *Betula pubescens* and *Molinia caerulea* were recorded with underlining *Holcus lanatus* and *Agrostis capillaris* vegetation.



Map Legend

-  Study Area
-  Atlantic Salt Meadows
-  Estuaries
-  Limestone Pavement
-  Lowland Hay Meadows
-  Orchard Rich Calcareous Grassland
-  Salicornia and other annuals colonising mud and sand
-  Tidal Mudflats and Sandflats



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Drawing Title

Article 17 Map

Project Title

Proposed New Entrance Road at Merlin
Park Hospital, Galway

Drawn By

DM

Checked By

PD

Project Ref.

241002-b

Drawing No.

Figure 3-3

Scale

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3.1.4 New Flora Atlas

The Study Area is located within the 10 km grid square M32. A search was made in the New Atlas of the British & Irish Flora (Preston et al., 2002) to investigate whether any rare plant species had been recorded in the relevant 10 km square in which the Study Area is situated, during the 1987-1999 atlas survey. These include species listed in Annex II of the Habitats Directive, Red Data List (Jackson et al., 2016) or protected under the Flora (Protection) Order (FPO), 2022. Records for grid square M32 are listed in Table 3-2.

Table 3-2 New Flora Atlas Records for M32

Common Name	Scientific Name	Status*
Shepherd's-needle	<i>Scandix pecten-veneris</i>	Red List - RE
Wormwood	<i>Artemisia absinthium</i>	Red List - VU
Small-white Orchid	<i>Pseudorchis albida</i>	FPO, Red List - VU
Slender Thistle	<i>Carduus tenuiflorus</i>	Red List - NT
Greater Knapweed	<i>Centaurea scabiosa</i>	Red List - NT
Sea-kale	<i>Crambe maritima</i>	Red List - NT
Dwarf Spurge	<i>Euphorbia exigua</i>	Red List - NT
Spring Gentian	<i>Gentiana verna</i>	Red List - NT
Autumn Gentian	<i>Gentianella amarella</i>	Red List - NT
Yellow Horned-poppy	<i>Glaucium flavum</i>	Red List - NT
Henbane	<i>Hyoscyamus niger</i>	Red List - NT
Dwarf Mallow	<i>Malva neglecta</i>	Red List - NT
Brackish Water-crowfoot	<i>Ranunculus baudotii</i>	Red List - NT
Least Bur-reed	<i>Sparganium natans</i>	Red List - NT
Autumn Lady's-tresses	<i>Spiranthes spiralis</i>	Red List - NT
Marsh Fern	<i>Thelypteris palustris</i>	Red List - NT
Knotted Hedge-parsley	<i>Torilis nodosa</i>	Red List - NT
Vervain	<i>Verbena officinalis</i>	Red List - NT
Green Field-speedwell	<i>Veronica agrestis</i>	Red List - NT

*FPO – Flora Protection Order 2022, Status: RE – Regionally Extinct, VU – Vulnerable, NT – Near Threatened.

3.15

National Biodiversity Data Centre Records

The National Biodiversity Data Centre (NBDC) was searched for records of flora and fauna for grid square M32H. Table 3-3 lists the protected faunal species (excluding birds) recorded within the 2 km grid square M32H which pertains to the Study Area boundary. Table 3-4 lists all the bird species that have been recorded within the same grid square.

Table 3-3 NBDC records for protected fauna (excl. birds)

Common Name	Scientific Name	Protection*
Badger	<i>Meles Meles</i>	WA
Common Bottlenose Dolphin	<i>Tursiops truncatus</i>	Annex II, IV, WA
Harbour Porpoise	<i>Phocoena phocoena</i>	Annex II, IV, WA
Common Frog	<i>Rana temporaria</i>	Annex V, WA
Common Newt	<i>Lissotriton vulgaris</i>	WA
Hedgehog	<i>Erinaceus europaeus</i>	WA
Marsh Fritillary	<i>Euphydryas aurinia</i>	Annex II
Red Squirrel	<i>Sciurus vulgaris</i>	WA
Short-beaked Common Dolphin	<i>Delphinus delphis</i>	Annex IV, WA
Striped Dolphin	<i>Stenella coeruleoalba</i>	Annex IV, WA

*Annex II, Annex IV, Annex V – Of EU Habitats Directive, WA – Irish Wildlife Acts (1976 as amended).

Table 3-4 NBDC Records for bird species in grid square M32H

Common Name	Scientific Name	Status*	SPA Special Conservation Interest (SCI) species**
Little Egret	<i>Egretta garzetta</i>	Annex I	No
Peregrine	<i>Falco peregrinus</i>	Annex I	No
Great Northern Diver	<i>Gavia immer</i>	Annex I	Yes- IGB
Common Tern	<i>Sterna hirundo</i>	Annex I	Yes- IGB, LC
Arctic Tern	<i>Sterna paradisaea</i>	Annex I	Yes- LC
Dunlin	<i>Calidris alpina</i>	Annex I, BoCCI Red List	Yes- IGB
Bar-tailed Godwit	<i>Limosa lapponica</i>	Annex I, BoCCI Red List	Yes- IGB

Common Name	Scientific Name	Status*	SPA Special Conservation Interest (SCI) species**
Meadow Pipit	<i>Anthus pratensis</i>	BoCCI Red List	No
Swift	<i>Apus apus</i>	BoCCI Red List	No
Kestrel	<i>Falco tinnunculus</i>	BoCCI Red List	No
Oystercatcher	<i>Haematopus ostralegus</i>	BoCCI Red List	No
Black-tailed Godwit	<i>Limosa limosa</i>	BoCCI Red List	No
Common Scoter	<i>Melanitta nigra</i>	BoCCI Red List	Yes- LC
Grey Wagtail	<i>Motacilla cinerea</i>	BoCCI Red List	No
Curlew	<i>Numenius arquata</i>	BoCCI Red List	Yes- IGB
Grey Plover	<i>Pluvialis squatarola</i>	BoCCI Red List	No
Redshank	<i>Tringa totanus</i>	BoCCI Red List	Yes- IGB
Redwing	<i>Turdus iliacus</i>	BoCCI Red List	No
Lapwing	<i>Vanellus vanellus</i>	BoCCI Red List	Yes- IGB

*Annex I – Of EU Birds Directive, Red List – Birds of Conservation Concern in Ireland.

**SPA: IGB – Inner Galway Bay SPA and LC – Lough Corrib SPA

3.1.6 Water Quality / Hydrology

The Study Area is located within the Carrowmoneash[Oranmore]_SC_010 surface water Sub Catchments. The closest waterbody is the Corrib Estuary which has a Water Framework Directive (WFD) 2016-2021 status of 'Moderate' and was categorised as 'Review'. The estuary is located at approximately 0.4km from the Study Area.

3.2 Field Survey

3.2.1 Habitats

A dedicated habitat survey of the area within and in the vicinity of the Study Area was undertaken on the 15th of November 2024 in line with NRA (2009) guidelines (Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes). The habitats recorded during the site visit are described below

The Study Area includes areas of semi managed agricultural grasslands, scrub, dense bracken, semi-native mature woodland, and areas of amenity grassland.

The large area of grassland present in the southeastern boundary of the Study Area was characterized as **Dry Calcareous and Neutral Grassland (GS1)** (Plate 3-1). This habitat, which was mown at the time of the survey, was dominated by bents (*Agrostis spp.*), meadow-grasses (*Poa spp.*), meadow foxtail

(*Alopecurus pratensis*), timothy (*Phleum pratense*), fescues (*Festuca* spp.), sweet vernal-grass (*Anthoxanthum odoratum*), crested dog's-tail (*Cynosurus cristatus*), cock's-foot (*Dactylis glomerata*), and Yorkshire-fog (*Holcus lanatus*). Other plant species recorded in this habitat included, creeping buttercup (*Ranunculus repens*), meadow buttercup (*Ranunculus acris*), yarrow (*Achillea millefolium*), ribwort plantain (*Plantago lanceolata*), red clover (*Trifolium pratense*), white clover (*Trifolium repens*), and ragwort (*Jacobaea vulgaris*), glaucous sedge (*Carex flacca*), meadowsweet (*Filipendula ulmaria*), St John's wort (*Hypericum* spp.), cat's-ear (*Hypochaeris radicata*), and hawksbit (*Leontodon* spp.), knapweed (*Centaurea nigra*), fairy flax (*Linum catharticum*), meadow vetchling (*Lathyrus pratensis*), self-heal (*Prunella vulgaris*), oxeye daisy (*Leucanthemum vulgare*), cowslip (*Primula veris*), and adder's tongue (*Ophioglossum vulgatum*). Mosses and bryophytes observed included *Calliergonella cuspidata*, *Pseudoscleropodium purum*, and *Ctenidium molluscum*.

This grassland transitioned into a mosaic of **Dense bracken (HD1)** and **Scrub (WS1)**, primarily composed of bracken (*Pteridium aquilinum*) and bramble (*Rubus fruticosus*), accompanied by meadowsweet, crested dog's-tail, nettle (*Urtica dioica*), and wood false-brome (*Brachypodium sylvaticum*) (Plate 3-2).

This mosaic habitat bordered the grassland to the west and north, which further transitioned into **(Mixed) Broadleaved Woodland (WD1)**. The woodland was characterized by a variety of tree, shrub, and ground flora species, such as sycamore (*Acer pseudoplatanus*), beech (*Fagus sylvatica*), holly (*Ilex aquifolium*), and pedunculate oak (*Quercus robur* saplings), ivy (*Hedera hibernica*), hart's-tongue (*Asplenium scolopendrium*), and broad buckler-fern (*Dryopteris dilatata*), *Neckera complanata*, *Thamnobryum alopecurum*, *Eurhynchium striatum*, *Homalothecium sericeum*, *Ctenidium molluscum*, and *Amblystegium serpens* (Plate 3-3).

Further north, the woodland composition included additional species such as ash (*Fraxinus excelsior*), witch elm (*Ulmus glabra*), hazel (*Corylus avellana*), European silver-fir (*Abies alba*), larch (*Larix* spp.), elder (*Sambucus nigra*), hawthorn (*Crataegus monogyna*), and spindle (*Euonymus europaeus*). Ground flora in this woodland included male fern (*Dryopteris filix-mas*), soft shield-fern (*Polystichum setiferum*), wood avens (*Geum urbanum*), enchanter's nightshade (*Circaea lutetiana*), wood speedwell (*Veronica montana*), and herb-Robert (*Geranium robertianum*). Additional bryophytes recorded within this woodland were *Polypodium interjectum*, *Atrichum* spp., *Frullania* spp., *Isoetium myosuroides*, *Kindbergia praelonga*, *Lophocolea bidentata*, *Metzgeria furcata*, *Hypnum cupressiforme*, and *Hylacomidiadelphus triquetrus*.

The southern boundary of the Study Area was characterized by a **Treeline (WL2)** of ash trees (*Fraxinus excelsior*) (Plate 3-4) with an understorey of scrub species, including meadow vetchling (*Lathyrus pratensis*), meadowsweet (*Filipendula ulmaria*), cow parsley (*Anthriscus sylvestris*), bramble (*Rubus fruticosus*), and goat willow (*Salix caprea*).

Other notable habitats within the study Area were, **Buildings and Artificial Surfaces (BL3)** which included the car park and existing road leading to the hospital. Two large mown **Amenity Grasslands (Improved)(GA2)** were recorded south of the car park and on the northern boundary of the Study Area. This habitat was dominated by perennial ryegrass (*Lolium perenne*), Yorkshire fog (*Holcus lanatus*), and creeping bent (*Agrostis stolonifera*). Accompanying species included smooth meadow-grass (*Poa pratensis*), meadow buttercup (*Ranunculus acris*), creeping buttercup (*Ranunculus repens*), ribwort plantain (*Plantago lanceolata*), dandelion (*Taraxacum officinale*), white clover (*Trifolium repens*), dock (*Rumex* spp.), oxeye daisy (*Leucanthemum vulgare*), Thyme-leaved speedwell (*Veronica serpyllifolia*) and mosses such as *Rhytidiadelphus squarrosus*. **Stone walls and other stonework (BL1)** covered in ivy was also recorded around the Study Area.

There were no watercourses recorded within or adjacent to the Study Area during the surveys undertaken.



Plate 3-1 Dry Calcareous and Neutral Grassland on the southeastern boundary of the Study Area.



Plate 3-2 Dense bracken and Scrub bordering the meadow to the west and north.



Plate 3-3 (Mixed) Broadleaved Woodland present within the Study Area.



Plate 3-4 Treeline of Ash and scrub along Southern boundary of Study Area.



Plate 3-5 Amenity grassland (improved) (GA2) noted on the northern boundary of the Study Area.

3.2.2 Invasive Species

No species listed under Regulations 49 and 50 of the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011) were recorded. However, the non-native noxious weed species recorded within the Study Area was Winter heliotrope (*Petasites fragrans*). This non-native species can often spread quickly, forming large dense monocultures, excluding native vegetation (TII, 2020).

3.2.3 Fauna

3.2.3.1 Badger

Scrub, treeline and open grassland habitat within the Study Area provide potential suitable supporting habitat for badger. Therefore, a badger survey was undertaken as part of the multidisciplinary survey on the 15th of November 2024 to determine the presence or absence of badger signs within Study Area. This involved a search for all potential badger signs as per NRA (2009) (latrines, badger paths and setts). Some worn trails were identified running through the scrub habitat on the northern boundary of the meadow but no further indication of this species, including setts, snuffle holes, prints or latrines, was identified during the surveys. However, scrub, dense bracken, treelines and (mixed) broadleaved woodland recorded within the Study Area provide suitable breeding habitat for this species and are likely to occur within the site, at least on occasion.

3.2.3.2 Otter

No otter holts (resting/breeding site) or other evidence of otters such as spraints, fish remains, couches or and prints, was identified during the walkover survey. Additionally, no watercourses or

drains were recorded during the surveys and therefore the site does not provide potential significant supporting otter habitat.

3.2.3.3 Bats

During the field surveys carried out the landscape features on the site were visually assessed for potential use as bat roosting habitats and commuting/foraging habitats using a protocol set out in Bat Conservation Trusts (BCT) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn.) (Collins, 2023). The aim of the survey was to identify suitable bat habitats within the site.

Whilst no evidence of roosting bats was identified during the walkover survey, trees within the mixed broadleaved woodland (Plate 3-6) have the potential to support roosting bats. The Study Area is considered to have the potential to support local bat populations, and these have been assigned as Local importance (higher value). In addition, the Study was identified as providing moderate suitability for foraging and commuting bats.



Plate 3-6 Example of trees within the mixed broadleaved woodland.

3.2.3.4 Bird

During the field surveys carried out in November of 2024, Common Gull and Black-headed Gull were recorded within the Study Area. These species are of Special Conservation Interest (SCI) to the Inner Galway Bay SPA located 0.37km from the Study Area. It is also to be noted that Inner Galway Bay SPA is of high ornithological importance with two wintering species having populations of international importance and a further sixteen wintering species having populations of national importance (NPWS, 2019). In addition, the open grasslands and woodland within the Study Area provide potential supporting habitat for bird species throughout the winter and migration periods. All other birds recorded were an assemblage of common and widespread species typical of amenity, urban, and agricultural habitats.

4.

ECOLOGICAL CONSTRAINTS

4.1

Habitats

The ecological importance of the habitats within the Study Area is shown in Figure 4-1 and are further described below. The mapping is colour-coded to clearly show areas of Local Importance (lower value), Local Importance (higher value), and County Importance. No habitats of greater than County Importance were identified within the Study Area. The habitat valuations are based on those set out in the *Guidelines for Assessment of Ecological Impacts of National Roads Schemes* (NRA 2009b).

- **Local Importance (lower value).** These areas comprise habitats which have been assessed as being of Local Importance (lower value). These include the buildings and artificial surfaces (BL3), amenity grassland (improved) (GA2), dense bracken (HD1) and scrub (WS1). Although these habitats contain small areas of semi-natural habitat that are of some biodiversity value, they are common and widespread in the wider area. No significant ecological constraints were identified in these areas.
- **Local Importance (higher value).** These habitats have been assessed as Local Importance (higher value) as they '*comprise semi-natural habitat types with high biodiversity value in a local context and a high degree of naturalness*' (NRA, 2009b). These include habitats such as Treelines, Stone wall and other stonework and (mixed) broadleaved woodland. Where feasible, any future development should avoid in resulting in the loss of habitats of Local Importance (higher value) as doing so will carry a **moderate planning risk**. Where losses are unavoidable, compensation measures should be included in future planning applications to ensure that there is no net loss of important habitat types and to negate planning risk.
- **County Importance.** Dry Calcareous and Neutral Grassland (GS1) recorded within the Study Area potentially conforms to the Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) (6210) Annex I habitat.

As such, these habitats have been assigned County Importance as they are '*sites containing an area or areas of the habitat types listed in Annex I of the Habitats Directive that do not fulfil the criteria for valuation as of International or National importance*' (NRA, 2009b). As these are habitat types of County Importance, the loss or damage to these habitats as a result of any future development will carry **high planning risk** as they are contrary to Policy 5.2 Protected Spaces: Sites of European, National and Local Ecological Importance of the Galway City Development Plan 2023-2029:

10) '*Protect and conserve rare and threatened habitats and their key habitats, (wherever they occur) listed on Annex I and Annex IV of the EU Habitats Directive (92/43EEC) and listed for protection under the Wildlife Acts 1976-2000 and plant species listed in the Flora Protection Order 2015*'.

It is to be noted that Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) (6210) are mapped approximately 230m south of the Study Area within Rosshill Park Woods while Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*) (6510) are also mapped north and south of the Study Area at approximately 100m and 115m, respectively.

4.2 Fauna

As described in Section 3.2.3 above, the Study Area provides potential suitable foraging, commuting, and/or breeding habitats for the following fauna:

- > Badger
- > Bats
- > Birds

Although no indications of the protected fauna listed above were recorded during site visits, these species, as per the desk study in Section 3.1, are likely to utilise the Study Area, at least on occasion due to the suitability of the habitats recorded in the Study Area to support these species. Further detailed surveys would be required to determine the significance of the Study Area for supporting these species and an Ecological Impact Assessment should be prepared. Further details on the required surveys are provided in Section 5.

4.3 Designated Sites

The Study Area is 0.29km and 0.37km north to the Galway Bay Complex SAC and Inner Galway Bay SPA, respectively and the potential for indirect impacts should be considered. Additionally, the grasslands within the Study Area provides potential foraging and roosting habitat for SCIs designated under the Inner Galway Bay SPA. As these European sites are of International Importance, any future proposals for the Study Area must fully assess potential for impacts on the Conservation Objectives of these European sites within a Natura Impact Statement to allow the competent authority to undertake an Appropriate Assessment.



Map Legend

	Study Area
	Ecological constraints
	Local Important (lower value)
	Local Important (higher value)
	County Importance



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Constraints Map

Proposed New Entrance Road at Merlin Park Hospital, Galway	DM	PD
24.1002-b	Figure 4-1	
1:2,500	09.12.2024	



Miko
 Environmental
 1.2.2024
 09.12.2024
 24.1002-b
 Figure 4-1
 1:2,500

5.

FURTHER SURVEY REQUIREMENTS

It can be concluded from the general ecological walkover survey carried out by MKO that further surveys will be required to inform and fully determine the potential impact of any proposals within the Study Area. The following surveys are recommended to be undertaken to inform an Ecological Impact Assessment (EclA) or Natura Impact Statement (NIS) to be submitted at planning:

- > Habitat assessment
- > Breeding birds
- > Wintering birds
- > Bats roost and activity survey
- > Non-volant mammals

5.1

Habitats

Further habitat surveys should be conducted to further characterise the habitats across the Study Area. These surveys need to be undertaken in the optimal growing season (May-September). This is especially important for the Dry Calcareous and Neutral Grassland (GS1), which could potentially conform to Annex I habitats.

Should additional surveys confirm Annex I habitat and should there be requirement for any of its removal, compensation measures will need to be included in any proposed planning application to ensure not only no net loss of this habitat of County Importance, but genuine efforts for a net gain would be required. Please note: any loss of habitat of Local Important (higher value) or above carries planning risk, regardless of mitigations.

5.2

Birds

As the Study Area was identified as providing potential supporting habitat for protected birds, any future proposal for the Study Area would need to fully assess potential impacts on bird species, in particular those associated with Inner Galway Bay SPA, and surveys should be undertaken to inform a complete assessment.

Breeding bird walkover surveys covering Study Area and a 500m survey radius from the development/planning boundary (where access allows) from April to July inclusive. Winter breeding bird surveys record the presence of wintering birds with particular reference to waders on site and to a radius of 500m from the development/planning boundary (where access allows) from October to March, inclusive.

Under Section 40 of the Wildlife Act 1976, the cutting, grubbing, burning or other destruction of vegetation growing on "any land not then cultivated" is prohibited between 1st March and 31st August to protect breeding birds.

Where breeding or wintering bird habitat has been identified, should there be any significant loss of such, compensation must be provided as part of any Proposed Development application within the Study Area.

5.3

Non-volant mammals

As the Study Area provides potential breeding habitat for badger, any future proposal for the Study Area would need to fully assess potential impacts on these species. Further dedicated mammal surveys, including badger, should be undertaken to inform any proposals for the Study Area and to inform any mitigation measure required to avoid potential impacts on this species. Mammal surveys

will be undertaken as per NRA (2009): Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes.

If any active or inactive breeding sites are found within 30m of the Proposed Development site, and cannot be avoided, a derogation licence from the NPWS may be required to progress the application. This application must include updated relevant mammal survey data. In addition, works near any mammal breeding site should also be avoided during their respective breeding season, and an ecological clerk of works will be required at the time of works, to ensure no mammals are significantly impacted.

5.4

Bats

As the Study Area was identified as providing potential roosting, foraging, and commuting habitat for bats, the potential for impacts on this receptor should be considered in any future proposal.

Dedicated bat surveys should be undertaken at the appropriate time of year (May to September) to determine whether there are roosting bats present around the woodland and to gain an understanding of bat activity across the Study Area. Identification of roost locations and activity levels across the Study Area would be required to inform lighting designs associated with any proposals as inappropriate lighting can lead to the abandonment of roosts. Any removal of a confirmed roost (if required) would need to be done under licence from the NPWS. Surveys should be undertaken as per *Collins 2023: Bat Surveys for Professional Ecologists, Good practice Guidance, 4th edition. Bat Conservation Trust*.

All bat species in Ireland, are listed under Annex IV of the European Union (EU) Habitats Directive which provides strict protection for Annex IV species and their breeding and resting places. Therefore, any Proposed Development that may impact these sites requires a thorough assessment of potential effects on these species. Should a bat roost be identified within the footprint of a development, Article 16 of the Habitats Directive allows for the issuance of derogation licences, but it sets out three pre-conditions that must all be met before a derogation from the requirements of Article 12 or Article 13 of the Directive can be granted.

These preconditions are also set out in Regulation 54 of the Regulations.

The preconditions are:

1. A reason(s) listed in Regulation 54 (a)-(e) applies.
2. No satisfactory alternatives exist; and
3. Derogation would not be detrimental to the maintenance of a population(s) at a favourable conservation status.

The derogation licence application must include:

- A bat survey report including detailed mitigation measures; and
- Evidence that (a) there is no satisfactory alternative to the works proceeding and (b) that the derogation is not detrimental to the population of the species.

The lighting design for the Proposed Development, if required, should also be designed to minimise impacts on bats species during the operational stage of the development due to artificial lighting. Recommendations in relation to lighting should be provided in the planning application and the lighting plan should have consideration to the *ILP (2023): Bats and Artificial Lighting at Night. Bat Conservation Trust* guidance.

5.5

Cumulative considerations

For any Proposed Development, ecological assessments must consider potential cumulative, and in-combination impacts on ecological receptors. Therefore, whilst a development may not result in significant impacts on biodiversity, when considered by itself, it may result in significant impacts when other developments are taken into account. For example, should it be assessed that a Proposed Development, with the implementation of mitigations, will not result in a significant loss of a habitat of local importance (higher value) or above within the Study Area, there may be a significant impact when other development is considered.

5.6

Biodiversity net gains

Any future developments should target biodiversity net gains to negate planning risk and to ensure that there is no significant negative impacts on any ecological receptor. This can be achieved by ensuring no significant loss of important habitat and the provision of a landscape plan or Biodiversity Enhancement plan in consultation with a suitably qualified ecologist.

6.

CONCLUSION

Ecological constraints that have been identified during the desk study and field surveys are shown in Figure 4-1 and outlined in Section 4 above. The main ecological constraints are habitats of Local Importance (higher value) and County Importance which were identified within the Study Area. Regarding fauna, the Study Area provides supporting habitat for bird species of SCI for the Inner Galway Bay SPA, as well as potential, breeding, foraging and commuting habitat for badger and bats.

Any future development should aim to avoid the loss of any habitats assessed as being of Local importance (higher value) or higher. The loss of any Annex I habitat of the EU Habitats Directive would carry **high planning risk**, as this would be in contradiction to the Galway City Development Plan 2023-2029. Whilst there are no significant risks associated with development in areas assessed as being of Local Importance (higher value), it is recommended that loss of these habitats within the Study Area is minimised through sensitive design. The proposal should also provide for the enhancement/creation of habitats to ensure a positive impact on biodiversity.

The Study Area provides potential suitable foraging, commuting, and/or breeding habitats for several protected species and therefore, target surveys should be undertaken to inform a robust impact assessment, as per Section 5 of this report.

Should significant supporting habitat or any breeding sites for any protected species be recorded and should the potential for significant impacts be identified as a result of a Proposed Development, avoidance and/or compensation mitigations must be provided, and a derogation licence from NPWS may also be required to proceed an application. Note, should a derogation licence be required for any species, this must be obtained and submitted with the planning application. Precautionary pre-commencement and supervision mitigations should also be provided, prior and during construction and operation.

As the study Area is located 0.29km and 0.37km from the Galway Bay Complex SAC and Inner Galway Bay SPA, respectively, designated sites under the EU habitats Directive, any future proposals for the Study Area must fully assess potential for impacts on European Sites with the provision of an Appropriate Assessment Screening report and/or Natura Impact Statement.

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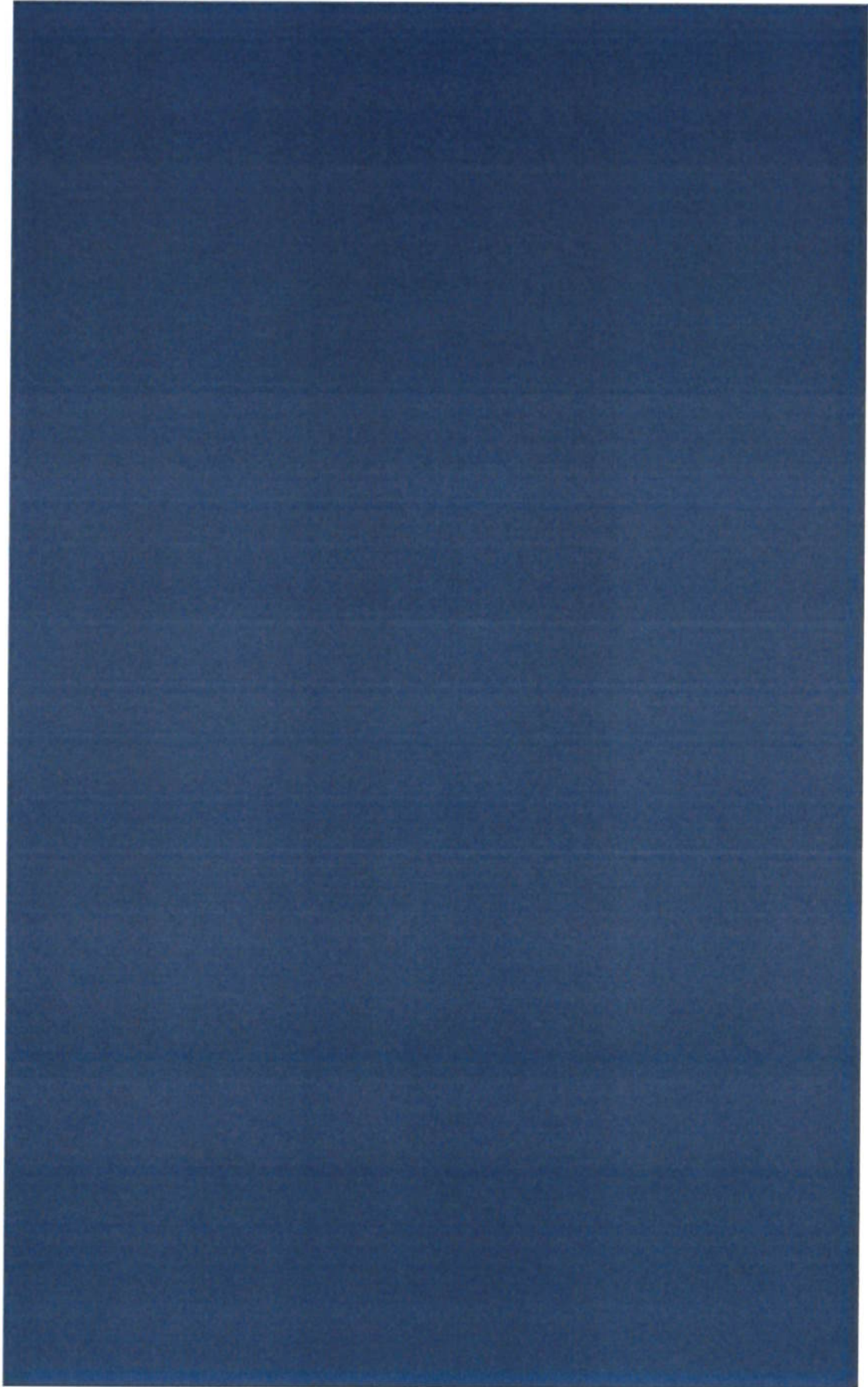
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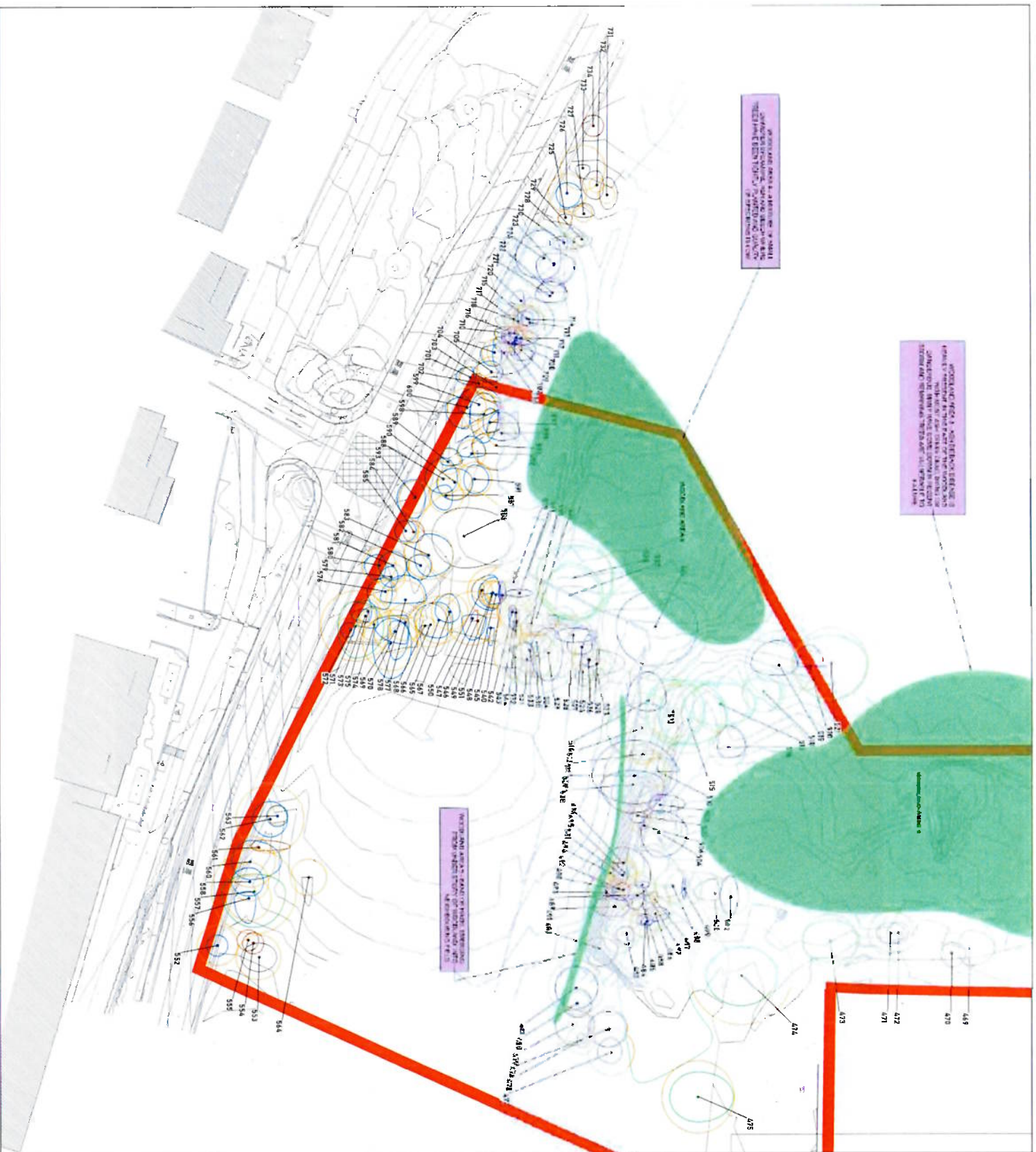
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LEGEND **TREE CONDITION CATEGORIES**

- A TREES OF HIGH VALUE AND QUALITY
- B TREES OF MODERATE VALUE AND QUALITY
- C TREES OF LOW QUALITY AND VALUE
- D DEAD TREES FOR REMOVAL

TREE CONSTRAINTS

DRAWING TO BE INTERPRETED WITH REFERENCE TO TREE SURVEY DOCUMENT

TREE CONSTRAINTS SHOWN ARE CALCULATED FROM GUIDELINES CONTAINED WITHIN SS3887 (2012) WITH DIMENSIONS CONTAINED WITHIN SECTION 8 OF THE TREE SURVEY DOCUMENT. THIS OUTLINE SHOULD NOT BE INTERPRETED AS A GUARANTEE OF THE ACCURACY OF THE TREE SURVEY DOCUMENT. THE TREE SURVEY DOCUMENT IS THE ONLY SOURCE OF INFORMATION FOR THE TREE SURVEY DOCUMENT. THE TREE SURVEY DOCUMENT IS THE ONLY SOURCE OF INFORMATION FOR THE TREE SURVEY DOCUMENT.



CONTINUED SHEET 1

NO.	DATE	DESCRIPTION
1	10/10/2018	ISSUED FOR COMMENT
2	11/10/2018	REVISED
3	12/10/2018	ISSUED FOR COMMENT
4	13/10/2018	REVISED
5	14/10/2018	ISSUED FOR COMMENT
6	15/10/2018	REVISED
7	16/10/2018	ISSUED FOR COMMENT
8	17/10/2018	REVISED
9	18/10/2018	ISSUED FOR COMMENT
10	19/10/2018	REVISED
11	20/10/2018	ISSUED FOR COMMENT
12	21/10/2018	REVISED
13	22/10/2018	ISSUED FOR COMMENT
14	23/10/2018	REVISED
15	24/10/2018	ISSUED FOR COMMENT
16	25/10/2018	REVISED
17	26/10/2018	ISSUED FOR COMMENT
18	27/10/2018	REVISED
19	28/10/2018	ISSUED FOR COMMENT
20	29/10/2018	REVISED
21	30/10/2018	ISSUED FOR COMMENT
22	31/10/2018	REVISED
23	01/11/2018	ISSUED FOR COMMENT
24	02/11/2018	REVISED
25	03/11/2018	ISSUED FOR COMMENT
26	04/11/2018	REVISED
27	05/11/2018	ISSUED FOR COMMENT
28	06/11/2018	REVISED
29	07/11/2018	ISSUED FOR COMMENT
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97	14/01/2019	ISSUED FOR COMMENT
98	15/01/2019	REVISED
99	16/01/2019	ISSUED FOR COMMENT
100	17/01/2019	REVISED

LEGEND

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- U DEAD TREES FOR REMOVAL

TREE CONSTRAINTS

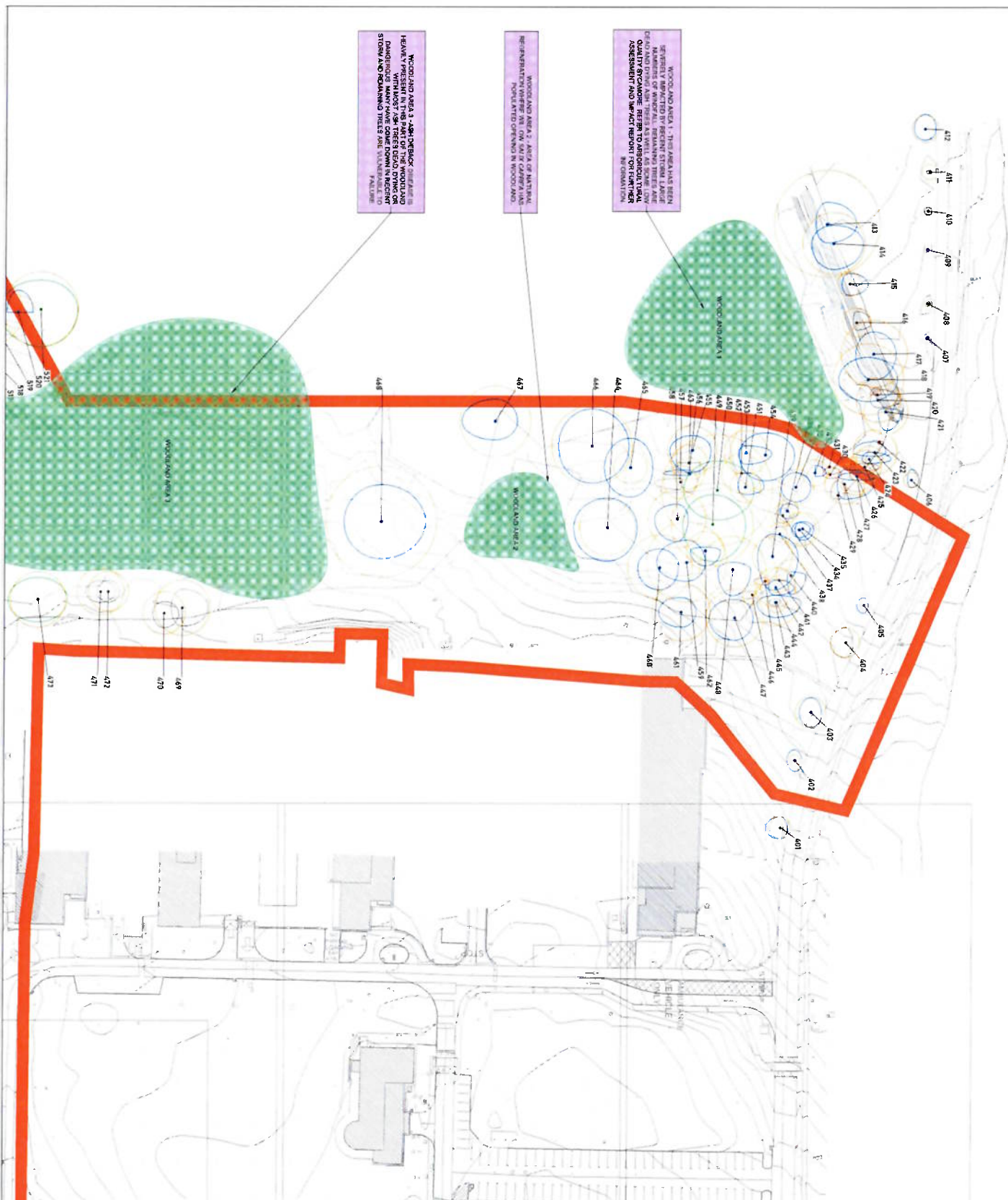
DRAWING TO BE INTERPRETED WITH REFERENCE TO TREE SURVEY DOCUMENT

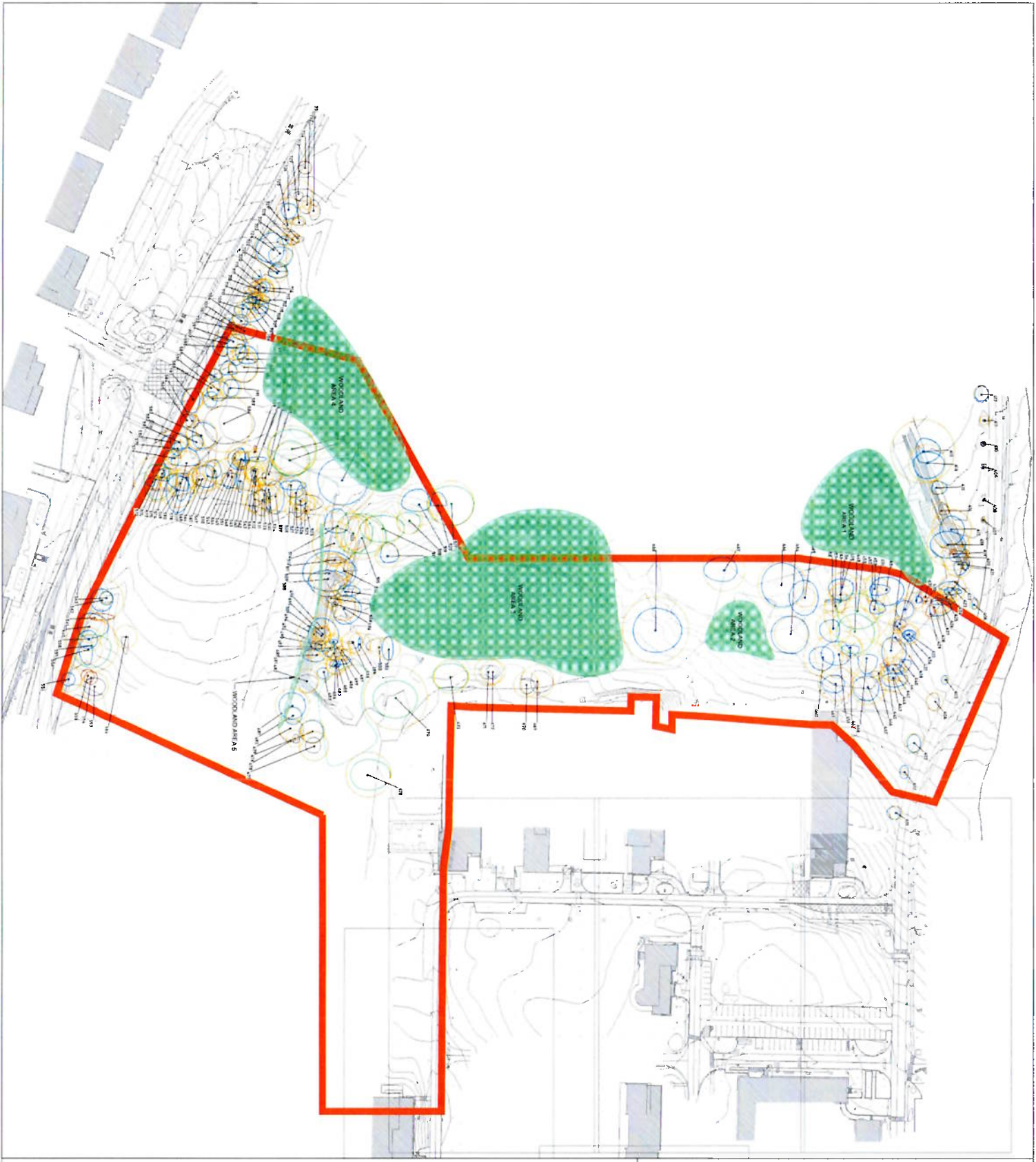
TREE CONSTRAINTS SHOWN ARE CALCULATED FROM GUIDELINES CONTAINED WITHIN 88867 (09/21) WITH DIMENSIONS CONTAINED WITHIN SECTION 8 OF THE TREE SURVEY DOCUMENT. THIS OUTLINE SHOULD NOT BE INTERPRETED AS THE EXACT EXTENT OF ROOT AREA. IT IS TO BE UNDERSTOOD THAT THE CRITICAL AREA TO BE REMOVED TREE OR OTHER OBSTACLES, IMPACTS

NATURAL AND/OR MAN MADE BARRIERS SUCH AS WATERLOGGED SOIL, OR BUILDINGS MAY RESTRICT THE SPREAD OF TREE ROOTS. GROWN SPREADS MAY VARY FROM YEAR TO YEAR AND THEREFORE THE CONSTRAINTS LINES SHOWN ON THIS DRAWING ARE THEREFORE A GUIDE ONLY. AN ON-SITE ASSESSMENT SHOULD BE UNDERTAKEN IN THE EVENT OF ANY CHANGES TO THE CONSTRAINTS LINES SHOWN FOR RETAINED TREES.



ENTIRE SITE N.T.S





LEGEND **TREE CONDITION CATEGORIES**

- A TREES OF HIGH VALUE AND QUALITY
- B TREES OF MODERATE VALUE AND QUALITY
- C TREES OF LOW QUALITY AND VALUE
- D DEAD TREES FOR REMOVAL

TREE CONSTRAINTS

DRAWING TO BE INTERPRETED WITH REFERENCE TO TREE SURVEY DOCUMENT

TREE CONSTRAINTS SHOWN ARE CALCULATED FROM GUIDELINES CONTAINED WITHIN BS5837:2012 WITH DIMENSIONS CONTAINED WITHIN SECTION 8 OF THE TREE SURVEY DOCUMENT. THIS OUTLINE SHOULD NOT BE USED TO DETERMINE THE EXACT LOCATION OF TREE CONSTRAINTS. THE OPTIMAL AREA TO BE RETAINED FREE OF DEVELOPMENTAL IMPACTS


NATURAL AND/OR MAN MADE BARRIERS SUCH AS FENCES, WALLS, DITCHES, ETC. WHICH MAY PREVENT THE GROWTH OF TREE ROOTS SHOULD ALSO BE SHOWN. WHERE GROWTH REDUCTION MAY NOT BE POSSIBLE DUE TO CONSTRAINTS, THIS SHOULD BE SHOWN ON THIS DRAWING AS A RED LINE. A RED LINE ON THIS DRAWING INDICATES AN AREA WHERE THE GROWTH OF ANY DEVELOPMENT BEING PLANNED WITHIN THE AREAS SHOWN FOR RETAINED TREES.



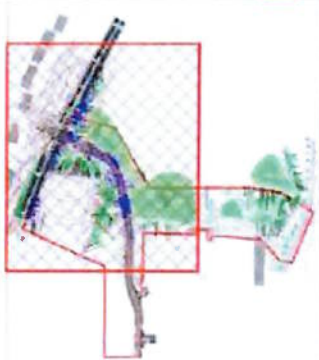
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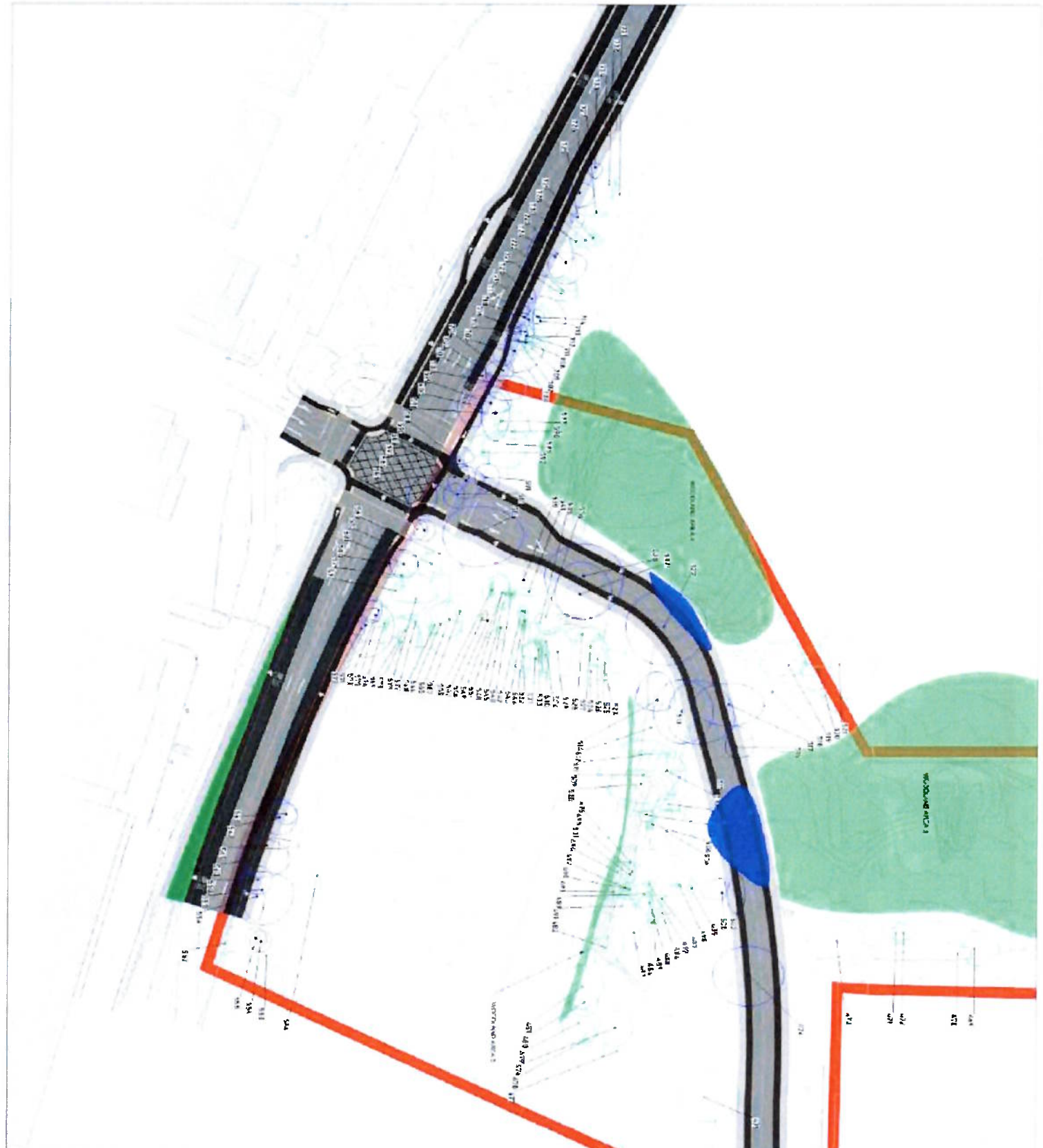
LEGEND **TREE IMPACT ASSESSMENT KEY**

-  TREE EXISTENCE
-  TREES REMOVED DUE TO LEVEL PRESENT
-  TREES NEAR QUALIFIED FOR REMOVAL DUE TO ANCHORAGE / LIMB PROBLEMS
-  SPECIAL ALTERNATIVE RETENTION
-  VESSEL AND/OR REMOVAL
-  TREE PROTECTION PERIMETER

DRAWING TO BE INTERPRETED WITH REFERENCE TO IPH 1.000-1.001 AND 1.002-1.003. NATURAL AND/OR MAN-MADE BARRIERS, SUCH AS WATERWAYS, SOIL OR BEDROCK, MAY PRESENT THE SOURCE OF THE HAZARD. SLOPES, SPREADS MAY ALSO PRESENT A COMBINATION OF HAZARDS. WHERE EXISTING RETENTION MAY BE POSSIBLE, THE CONSTRUCTION LINES SHOULD BE DRAWN AS CLOSE AS POSSIBLE TO THE EXISTING LINES. THE LINES SHOULD BE DRAWN AS CLOSE AS POSSIBLE TO THE EXISTING LINES. THE LINES SHOULD BE DRAWN AS CLOSE AS POSSIBLE TO THE EXISTING LINES.



FUTURE TREE NITR



LEGEND

TREE IMPACT ASSESSMENT KEY

-
- TREES FOR RETENTION
- TREES REMOVED DUE TO DEVELOPMENT
- TREES RECOMMENDED FOR REMOVAL DUE TO ARBORICULTURAL PRINCIPLES
- VEGETATION FOR REMOVAL
- TREE PROTECTION FENCING

DRAWING TO BE INTERPRETED WITH REFERENCE TO TREE SURVEY DOCUMENT

NATURAL AND/OR MAN MADE BARRIERS SUCH AS WATERLOGGED SOIL OR BULK DUMPS MAY NOT BE STRICT THE SPREAD OF TREE ROOTS. CROWN SPREADS MAY ALSO PROVE TO BE A CONSTRAINT PASTICALLY WHERE CROWN REDUCTION MAY NOT BE POSSIBLE. THE CONSTRAINTS LISTED SHOWN ON THIS DRAWING ARE THEREFORE A GUIDE ONLY. AN ON SITE ASSESSMENT SHOULD BE UNDERTAKEN FOR THE ENJOY OF ANY DEVELOPMENTS BEING PLANNED WITHIN THE AREAS SHOWN FOR RETAINED TREES.



Ch'ing-tai 16.21.15



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LEGEND **TREE IMPACT ASSESSMENT KEY**

-  HEALTHY TREE
-  TREE REMOVED FOR CONSTRUCTION
-  TREES RECOMMENDED FOR RETENTION DUE TO LANDSCAPE DESIGN OR OTHER FACTORS
-  VULNERABLE TREE
-  VULNERABLE TREE
-  TREE PROTECTION FENCE

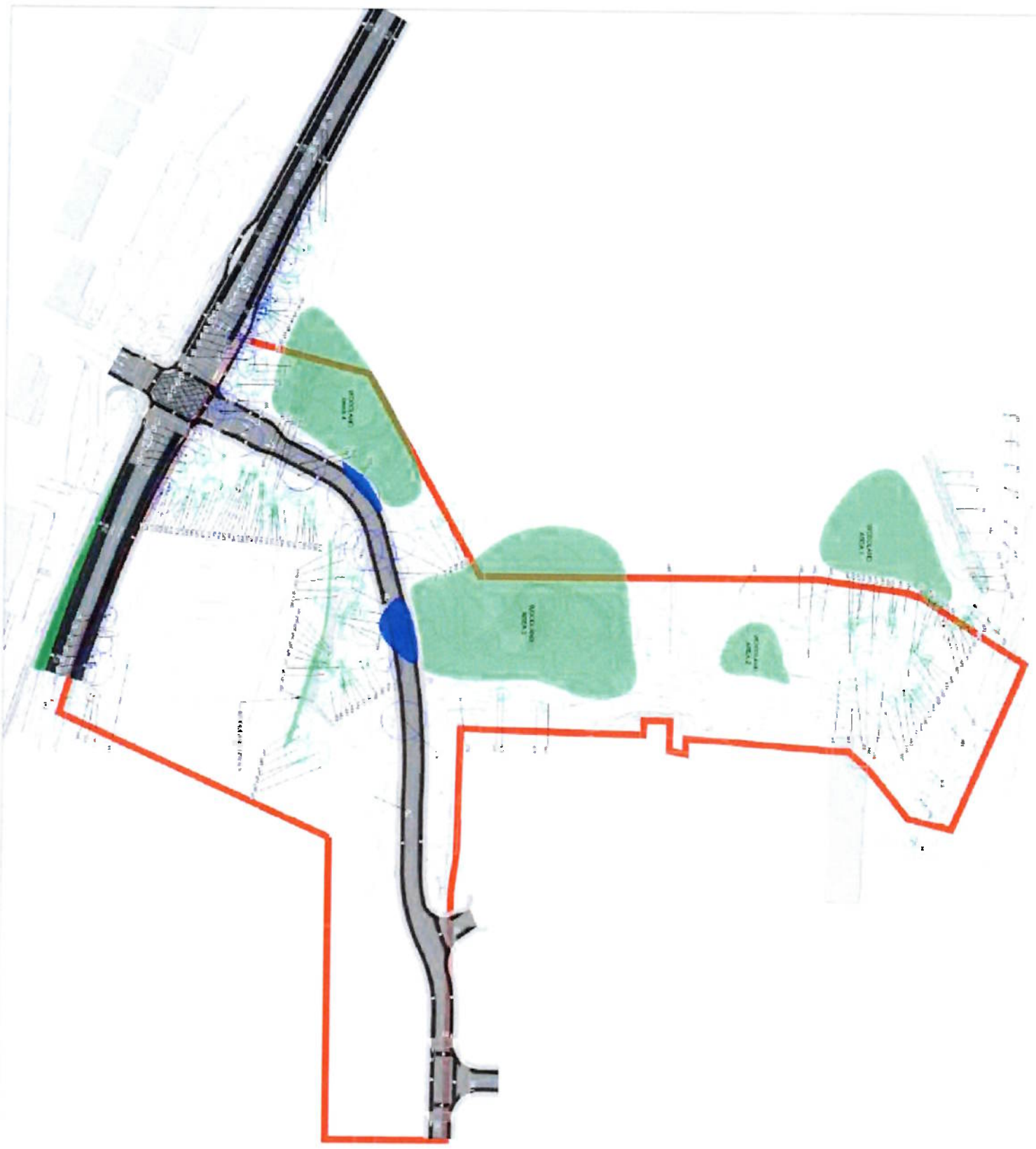
DRAWING TO BE INTERPRETED WITH REFERENCE TO TREE SURVEY DOCUMENT

LANDSCAPE ARCHITECT: JAMES W. SMITH, INC.

DATE: 10/15/2010

PROJECT: 10000 S. 100TH AVE. N.E. CORNER OF 100TH AVE. AND 100TH AVE. N.E.

THESE RECOMMENDATIONS ARE BASED ON THE INFORMATION PROVIDED IN THE TREE SURVEY DOCUMENT AND THE LANDSCAPE ARCHITECT'S VISUAL INSPECTION OF THE SITE. THE LANDSCAPE ARCHITECT DOES NOT GUARANTEE THE ACCURACY OF THE TREE SURVEY DOCUMENT OR THE RESULTS OF THIS ASSESSMENT. THE LANDSCAPE ARCHITECT'S RESPONSIBILITY IS TO PROVIDE AN OPINION BASED ON THE INFORMATION PROVIDED AND HIS VISUAL INSPECTION OF THE SITE.



NO.	DATE	DESCRIPTION
1	10/15/2010	INITIAL DRAFT
2	10/15/2010	REVISIONS
3	10/15/2010	FINAL



